



**FOOD AND
AGRICULTURE
ORGANIZATION OF
THE UNITED NATIONS**

**WORLD
HEALTH
ORGANIZATION**



E

PEC/CRD 16

**FAO/WHO PAN-EUROPEAN CONFERENCE
ON FOOD SAFETY AND QUALITY**

BUDAPEST, HUNGARY, 25 – 28 FEBRUARY 2002

CONFERENCE ROOM DOCUMENT

Italian contribution

Ministry of Foreign Affairs

Ministry of Agriculture

Ministry of Health

*National Research Institute
for Food and Nutrition*

Superior Institute of Health

ITALIAN CONTRIBUTION

FOOD SAFETY

The signalling of more and more frequent food emergencies occurred in Europe in the last years created a great input in changing the approach of the theme of food security in order to manage the risks for human health that could occur in any point of the food chain. In this new approach, food safety is based on the three components of risk analysis (assessment, management and communication) all along the food chain. A national structure for food safety is not yet active, but a food safety policy involving Governmental Institutions is already regulated by the principles of risks analysis.

In fact, the Ministry of Health through the General Direction of the Veterinary, Food and Nutrition Public Health is entrusted, at the central level, of the management of the risk. As far as risk assessment related to food contaminants is concerned, this central structure is supported by the National Health Institute (ISS) and by the Superior Health Council, and for specific topics by the official laboratories of Experimental Zoo-prophylactic Institutes, by the National Institute for New Technologies, Energy and Environment (ENEA), by the Interministerial Commission for Biotechnology, by the Consultative Commission for special nutrition products, by the Interministerial Commission for evaluation of notifications aimed at new products and new ingredients, Consultative Commission for pesticides. The Ministry of Agriculture through the activity of the Inspectorate for Frauds Repression is connected with food production and manufacturing. The Office is present in the National territory with 22 regional offices coordinated by the central structure. Moreover, the National Research Institute for Food and Nutrition, which depends on the Ministry of Agriculture, has among its tasks the promotion and development of research on food safety and quality; it performs analysis of exposure to food chemicals with the use of its own food survey databanks, in collaboration with the Superior Institute of Health. Programmes for the assessment of contaminant presence in the food chain at National and European level are active at the moment. However, for some contaminants and additives data collected until now are not sufficient for an adequate assessment of risk. Official controls to be performed at regional level are determined by annual programmes. The official controls of food quality and safety are guaranteed by the Local Health Units and District Public Health Laboratories and specifically by veterinary Services for animal-derived foodstuffs and by public Hygiene Services for other food categories.

In addition to monitoring programme, evaluation of epidemiological studies on food borne diseases are another means for identification of risks. In Italy notification is mandatory only for diseases related to specific food pathogens such as *Salmonella*, *L. monocytogens*, *Brucella*, *C.botulinum*, *Hepatitis A*, *Trichinella* while for other pathogens, programmes for optional surveillance are active.

FOOD QUALITY

“Quality” has become a central topic in Italian agriculture and food industry; a complex scientific and technological debate aimed at the definition of quality concept is at the moment in progress. Dramatic events such as BSE, dioxin, pesticides and hormones contaminants, and the increasing number of pollution-related cancers, focus consumers and industry attention on safety. Respect to the past a different idea of quality is gaining ground. The modern concept is summarised in the “quality profile” of a product that include different aspects of its value. In addition to that, a specific request for effective guarantees and product certification is performed by producers and consumers.

Quality involves a deep re-organization of farms and production technologies. Control systems, certification standards, the whole business management have to be checked in function of the new point of view. Scientific institutions can support producers by setting up new technologies (biological, organizational and computerized), according to criteria of quality and safety.

Food composition assessment and new technologies for food production are the focal points in the modern approach. It should be pointed out that substantial changes occurred over the past few years in the production and processing of certain classes of food (organic foods and light products).

In order to increase competitiveness on the world market, Italian farmers have addressed their efforts towards the achievement of qualitative targets aimed to meet both the needs of technological processes and safety requirements. The selection of crop strains and the use of new techniques for growing and preserving food (e.g. integrated pest control, preservation of cereal grains by refrigeration) are examples of this trend.

As far as food processing and preservation techniques are concerned, production is increasingly oriented towards the use of mild technologies characterised by extremely selective and minimal treatments. The global effect is a reduction of thermal and mechanical damage as well as chemical and biological contamination. This approach has been extensively applied in the manufacturing of fat containing foods, with particular regard to products containing saturated fatty acids and cholesterol. Manipulation of composition was traditionally performed in the sector of meat production even though dairy products are a group of food in which changing of composition is becoming more and more frequent. The fastest-growing products in this sector are the low-fat or “light” foods. In this case, modification of legislation was necessary in order to provide consumers with a an adequate information.

The increasing consumption of functional foods and herbal products is another characteristic of the modern request in industrialised countries. The inclusion of these products in a normal diet was considered, in the traditional definition, to promote well-being and health. Functional foods are defined as products in which key nutrients had been added in order to increase their intrinsic health benefits. This category include a wide range of products in which the original matrix is modified by the addition of vitamins or minerals or other bioactive compounds. This large group include also probiotics, prebiotics, symbiotics, bioactive peptides and lipids, fibre and vegetable extracts. A different category of products are dietary supplements composed by purified form of multimicronutrients and distributed in form of pills or other pharmacological preparations. This group comprises also the large category of herbal products. In the same way, the market shares of cereal grains, and the so-called “wholemeal” products

(biscuits, crackers, etc.) are increasing steadily since consumers appreciate the physiological and metabolic benefits of their higher fibre content.

Data on the composition of foods commonly consumed in Italy are provided in tables prepared by the National Research Institute for Food and Nutrition, but the growing number of foods on the market and their continuous evolution makes it essential to update the nutrient composition reported in the tables, especially regarding to micronutrients (vitamins and trace elements) and other components that are recognised to play a role in the prevention or control of a number of pathologies.

Traditionally the relationship between nutrition and health was attributed to food composition in term of macronutrients. In the modern context, a relevant role is now ascribed to minor compounds such as fibre, antioxidants, vitamins and other bioactive substances. Mediterranean diet products are particularly rich of these compounds, and, for this reason they could be considered as a sort of functional foods. Also modern typical Italian foods contain remarkable quantity of these bioactive compounds; efforts are increasing in the development of processing and storage systems aimed at preserving these qualities. The role of bioactive compounds in preventing chronic metabolic diseases such as cardiovascular affections is largely recognised. The promotion of typical products (controlled and certified in EU legislation), and the protection of traditional foods, often out of the rules but with an intrinsic guarantee of quality are an added value of Italian dietary style.

Certification

An extensive political, technical and scientific debate on standards and certification (part of the broader issue of food quality) has been going on over the past few years within all the relevant Italian and EU organisations.

The debate was generated by the new philosophy behind EU legislation in the matter of food. The “active policy of quality” in the food industry emerging from the documents could be translated in EU encouraging operators to use (also with spontaneous attitude) the instruments indicated by the EU Commission, especially in the Organised Great Distribution (*Grande Distribuzione Organizzata – GDO*).

In addition to “*certificates of identity*” and “*guarantee of geographical origin*” suitable indicate in the label, these instruments include traceability certification of products “*from farm to fork*”. These means are a further guarantee for consumers as far as the identification of products source and production methods is concerned, besides their geographic origin.

NUTRITION AND HEALTH

Diet’s influence on health can take many forms: acute or chronic deficiency of essential nutrients; toxic effects of nutrients, non-nutrients or contaminants present in foods. However, the most important element in the context of developed countries is the large diffusion of chronic non-communicable human diseases for which nutrition is an important factor of protection or risk. The main nutrition-related diseases are obesity, cardiovascular diseases, some tumors, diabetes, osteoporosis, goitre, nutritional anaemia, dental decay, cirrhosis, allergy and intolerance. Food consumption patterns are changing rapidly. In the last years, the diet has improved in terms of free sugars, total fat and saturated fats but complex carbohydrates are lower and lower. In Italy and in other industrialised Countries, a recent event is the rapid diffusion of

functional foods and herbalist products aimed at improving human nutritional and psychophysical well being.

Social costs of diet related diseases

In Italy, as in other industrialised countries, the most important causes of death are cardiovascular diseases and cancers. In 1996, in Italy, 43% of deaths were caused by cardiovascular pathologies. Among them, coronary diseases were a cause of death in 31% of the cases versus 28% for cerebrovascular affections. Cancer is the second cause of death in Italy with 28% of deaths in 1996.

An evaluation of premature death (before the age of 65) in Italy showed that tumors represent the cause of death with greater contribution to Years of Productive Life Lost (26% versus 15% of cardiovascular diseases).

Direct costs of diseases related to nutrition can be roughly estimated from the National Health System's expenditures. The greater quota of hospitalisation in 1997 was found for cardiovascular diseases (15%) with an average permanence in the hospital of 9 days. Tumors showed a lower frequency of hospitalisation (10%) but a longer permanence, on average, in the hospital (10 days). In Italy, a day of permanence in hospital corresponds, on average, to €500 per patient per day, leading to an amount of 10.000 millions of Euros in 1997 for cardiovascular diseases and tumors. It should be pointed out that hospital costs represent only a part of the expenses for health services.

Nutrition can be an important risk or protective factor for many other affections for which. Thus, goitre is endemic in several Italian areas both urban and rural. Obesity is a pathology *per se* and a risk factor for other chronic-metabolic diseases. In 1999 the evaluation of 22.000 children in a central region of Italy showed a prevalence of 27% of overweight and 15% of obesity. For adults, a national survey performed in 1999 showed a prevalence of 33% of overweight and 9% of obesity.

Nutrition policy

The ultimate aim of nutritional policy is to reduce the prevalence of nutritional-related diseases and the social costs and human suffering resulting from them. Diet could reduce the prevalence of cardiovascular diseases *per se*, and by lowering their most important risk factors, such as blood cholesterol concentration or hypertension. It is estimated that about 35% of tumors could be prevented by dietary strategies.

As regards iodine-deficiency disorders, prevention takes the form of iodine prophylaxis. Investing money in an adequate educational campaign would lead to the widespread adoption of iodised salt and a rapid drop in the high costs of goitre treatment.

The two main Italian authorities involved in nutritional policy activities at national level are the Ministry of Health and the Ministry of Agriculture. The National Research Institute for Food and Nutrition depends on the Ministry of Agriculture and conducts research in food science and in human nutrition. This Institute receives specific funding from the Ministry of Agriculture and the Ministry of Health to perform activities of nutritional surveillance and of nutritional education and coordinates the process of developing tools and setting targets for nutrition. Thus, the production of national tables of food composition, the production of Recommended Daily Allowances for the Italian population and Dietary Guidelines for a Healthy Nutrition are

important tools for such activities. The development of a European food surveillance system based on standardised epidemiological databanks including both food consumption data and morbidity data would be most useful to monitor food safety, food quality and dietary patterns and to improve food and nutrition policies at European level.

PROPOSALS

1. Set up a common list of foodborne pathogens to be notified in all European Countries.
2. Define common procedures to assess safety and efficacy of herbal products.
3. Develop intervention strategies and food based dietary guidelines to reach the population nutrition goals established by EURODIET
4. Promote the consumption of foods with a certified quality recognised by law and of traditional regional foods, within education campaigns for healthy nutrition.

1. **Set up a common list of foodborne pathogens to be notified in all European Countries**

Since foods and drinks are largely traded through the European Region with ever less barriers, it is important that all European Countries follow the same food safety objectives. Therefore, to undertake the risk assessment of foodborne pathogens it is necessary to reach to an European list of pathogens that must be notified. For some of them, in fact, insufficient data on the incidence of infection are available because the organisms are not notifiable or are not considered in the same way in all European Countries. In this view, an identification of priority for the microbiological risk assessment should be undertaken.

2. **Define common procedures to assess safety and efficacy of herbal products.**

The intake of herbal products has recently been increasing in developed countries, because of their supposed health-related benefits, specifically the improvement of psychological and physiological well-being. However, scientific evidence of the efficacy of these products often lack. For these reasons, a common strategy should be adopted, in order to assess the safety and efficacy of herbal products, and to produce guidelines with appropriate indications for restricted use in relation to certain population groups, before admission on the market.

3. **Develop intervention strategies and food based dietary guidelines to reach the population nutrition goals established by EURODIET**

EURODIET is a project founded by European Commission aimed at the establishment of nutritional goals for Europe to be reached through food based dietary guidelines. Several aspects of nutritional habits and lifestyle were analysed in order to produce recommendations with a strong scientific basis aimed at improving the health status of the population. Translating nutrient goals into dietary guidelines is a complex process for which a standardised methodology is

required. Each European country should develop food based dietary guidelines and intervention strategies to reach the population nutrition goals established by EURODIET.

4. Promote the consumption of foods with a certified quality recognised by law and of traditional regional foods, within education campaigns for healthy nutrition

Italian agro-food is an important sector of national economy characterised by gastronomic and enological products of high quality including certified and recognised products. For those, a specific “*certificate of identity*” and “*guarantee of geographical origin*” is indicated in the label. In addition to that, traditional regional foods are largely diffused and requested by consumers often without specific rules. These products are particularly relevant in the national economy and are not constituted only by wine and cheese but also by meat products, olive oil and vegetable products. The problem of certification and the exacerbation of quality aspects are extremely complex. An excess in that sense could create confusion in consumers’ perception. It is very important to set up an information policy aimed at increasing the knowledge related to the intrinsic quality of products; quality is an added value of Italian dietary style. It is also of utmost importance to provide adequate information to the European consumers in relation to the traditional way of consuming typical Italian foods with particular regard for safety aspects (es. the rind of Gorgonzola should be removed before consumption).