

Analyses

Rethinking the Mediterranean diet for the 21st century

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The Mediterranean Diet

The dossier nominating the Mediterranean Diet (MD) as a candidate for UNESCO's World Heritage List defines the diet as follows: "...derived from the Greek word *diaita*, lifestyle - [it] is an essential part of Mediterranean social life, drawing on the expertise, knowledge and traditions that go into all aspects of food production and consumption in the Mediterranean, from farm to fork, including cultivation, harvesting, gathering, fishing, preservation, preparation, cooking and, most important of all, ways of eating".

These skills and traditions are associated with the rhythm of the seasons and marked with natural, religious or ritual significance. The MD as a unique way of life born of the Mediterranean climate and geography is also to be seen in the feasts and celebrations associated with this way of life. These events become a means of expressing fellowship, hospitality, neighbourliness and conviviality, and of handing down traditions and engaging in cross-cultural dialogue. They enable Mediterranean populations to rediscover a sense of common identity, belonging and continuity, which they recognise as essential to their shared intangible cultural heritage.

This definition of "Mediterranean Diet" thus reflects its many different dimensions:

- **alimentary-gastronomic:** the excellence of Mediterranean cuisine is almost universally acknowledged, and only partly for its nutritional and dietary virtues. Indeed it has always been appreciated for its unique flavours and aromas, which have made it famous across the entire world;

- **cultural:** it is a reflection of all the traditions built up over the centuries by successive populations, central to which are the various places characteristic or emblematic of the Mediterranean diet, including olive groves, market places, public squares, and popular eating places where people can meet up. The continuous day-to-day preparation (and reinvention) of the Mediterranean diet guarantees and safeguards its continuing spread and ensures that it is passed down to the rising generations;

- **historical:** it is associated with geographical, environmental, religious, social and ecological contexts which have developed over time and continue to develop, notably in terms of production, consumption and marketing;

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CIHEAM

Founded in 1962,
CIHEAM

is an intergovernmental
organisation comprising
thirteen member
countries from the
Mediterranean Basin.

CIHEAM

is made up of a
General Secretariat
(Paris) and four
Mediterranean
Agronomic Institutes
(Bari, Chania,
Montpellier and
Zaragoza).

In pursuing its three
main complementary
missions (post-graduate
specialised education,
networked research
and facilitation of the
regional debate),
CIHEAM has established
itself as an authority
in its fields of activity:
Mediterranean
agriculture, food and
rural development.

At present,
Mr Abdelaziz Mougou is
CIHEAM's President and
Mr Francisco Mombiela
is its Secretary General.

- **environmental:** many indicators show that the agrifood products used in the MD have a lower impact on natural resources than those used in other diets, such as the North American one, which is predominantly made up of meat and sugars. The impact of food production and consumption on the environment can be measured by its ecological footprint. This general notion encompasses the more specific "carbon footprint" (CO2 emissions), "land footprint" (demand on land resources) and "hydric footprint" (demand on water resources). It follows that the typology, composition and quantity of food consumed will have a significant effect on CO2 emissions and on the interaction between man and nature, or more generally on the relationship between consumption and resources (soil and water) and the Earth's capacity to regenerate them;

- **nutritional and health-giving:** it helps reduce factors that predispose people to chronic degenerative illnesses, thereby improving social well-being and reducing public expenditure. In short, its merits are a scientific certainty and are continuously being bolstered and confirmed by new studies and research by scientific institutions in all the developed countries.

In this connection, it is worth emphasising the importance of education in nutrition, for we are becoming increasingly aware of the need to increase our daily intake of fruit and vegetables in order to reduce serious pathologies related to obesity, such as cardio-vascular and other diseases, which are becoming increasingly prevalent in western society. Recent data (2006) shows that one billion people in the entire world are overweight or suffer from obesity. The World Health Organisation (WHO) has stated that a daily intake of 400 grams of fruit and vegetables is the minimum requirement for a balanced diet, thereby confirming the healthiness of the MD.

Mediterranean Diet Pyramid

The discovery of the health-giving properties of the MD is attributed to the American researcher Ancel Keys, who on the basis of a pioneering study he coordinated in 1950, the "Seven Countries Study", highlighted the correlation between cardio-vascular diseases and diet. The study involved 12,000 subjects and its findings were unequivocal: the more their diets deviated from the Mediterranean models, the higher the incidence of cardio-vascular disease among them was. In Italy, in particular, it was found that people in the South ate more food of vegetable origin, such as cereals (pasta, rice, bread and biscuits) and a wide variety of fruit and vegetables. Food of animal origin chiefly consisted of cheeses, eggs (rather than meat) and fish. Olive oil was used almost exclusively as an accompaniment to food, unlike in the North, where greater amounts of butter and other animal fats, such as lard, were consumed. In the years following publication of the findings, numerous research studies confirmed the close correlation between diet and cardio-vascular diseases and not long ago doctors and nutritionists concurred in recommending a diet which, like the MD, provided the optimal spread of daily calorie intake over different nutrients, in accordance with a food pyramid model that has cereals at the base.

Today we tend to replace the cereals at the base with fruit and vegetables, given that the present western way of life, an increasingly sedentary one, does not allow us to "consume" the quantity of calories provided by cereals on a daily basis. Consequently, the base of the most recent food pyramid consists of items of vegetable origin, which are typical of the MD in terms of their high level of non-energy-yielding nutrients (vitamins, minerals, and water) and their protective compounds (fibre and bioactive compounds of vegetable origin).

Although the scientific community is unanimous in approving the traditional form of the MD, it wonders whether it might not be necessary to update the recommendations based on this model, highlighting the challenges raised by new ways of life and new eating habits, as well as the environmental and health constraints facing new generations and different countries with wide-ranging, culturally diverse populations.

A great many issues arise, which need to be considered when promoting the MD. They have to do with:

- a) the merits of foodstuffs that are fresh, almost entirely unprocessed, local and seasonal;
- b) the balance between food with high energy yield and food with high nutritional value, given the fall in energy consumption and the increasing incidence of obesity;
- b) the availability, sustainability, accessibility and low cost of the recommended foods; and
- d) adaptation to different geographical, socio-economic and cultural contexts.

MAI Bari

In February 2010 MAI Bari initiated a new Distance-Learning Project on new integrated management techniques for the treatment of fruit crop diseases in the Mediterranean and Balkans. The project is funded by the Italian Ministry of Foreign Affairs.

The beneficiaries of the project are 50 managers and technicians from public and private regional bodies active in managing fruit crop diseases. At the end of the project there are plans to set up a professional community of practice through which the participants can exchange information and pool experience.

The ultimate goal is to build the technical capacity of regional partner institutions.

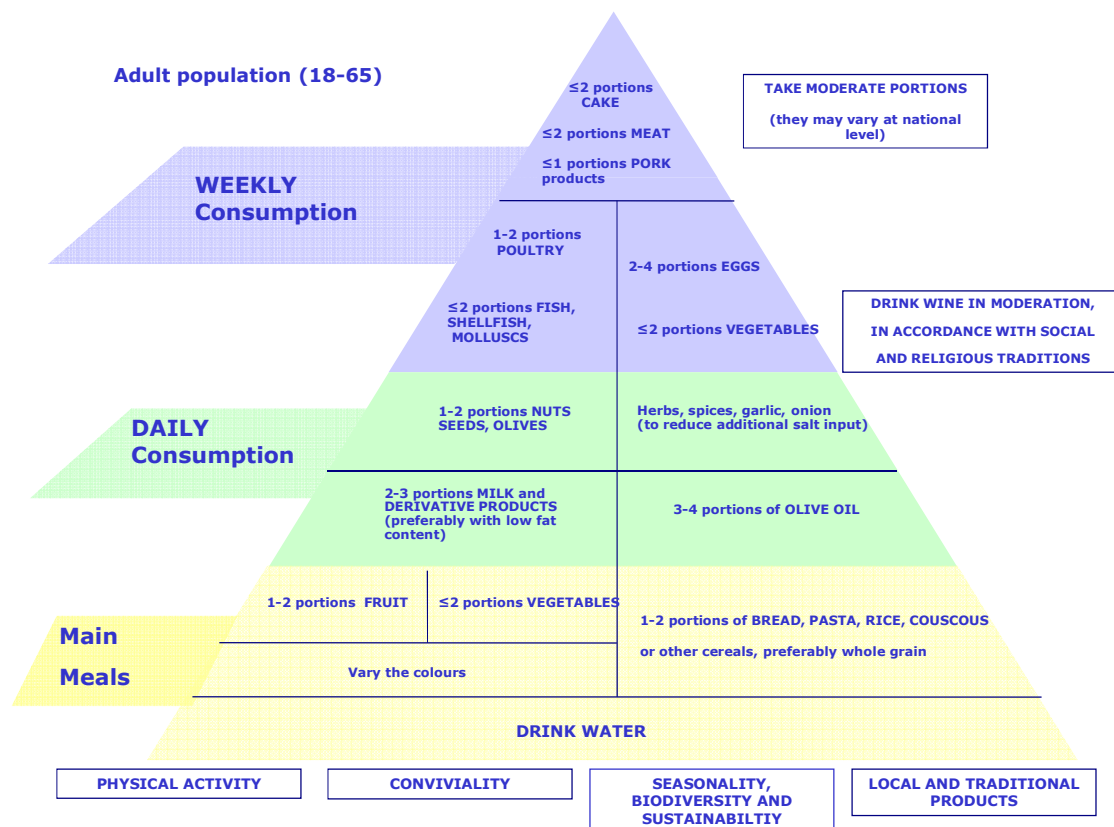
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A new modern pyramid to characterise the Mediterranean Diet

In the light of these considerations, a proposal for a new food pyramid was presented during deliberations at the 3rd International Conference of the CIISCAM (International Inter-University Centre for Mediterranean Food Culture Studies). This pyramid was the result of work conducted jointly by research institutions, universities, international organisations (CIHEAM, FAO, Biodiversity, University of Provence, University of Athens...).

The main purpose of this collaboration was to study the intrinsic value of the MD and encourage the development of an agrifood sector that respected the environment and was in tune with the requirements of the new millennium. In the course of the work, participants agreed upon a "consensus position paper" which provided a basis for the preparation of a new MD, represented diagrammatically by the food pyramid (figure 1). This diet is in phase with our lifestyles and will serve as a model both for the 18-65 age group and, with the necessary adaptations, for children, pregnant women and other sections of the population with particular health needs.

Figure 1. Modern Mediterranean Diet Pyramid



Source: Prepared by CIHEAM - MAI Bari using data from the 3rd International Conference of CIISCAM

The pyramid is divided into three parts, which group the food according to the recommended frequency of consumption: weekly, daily and at main meals. At the top we find food intended to be consumed in moderation over the week, namely cakes, red meats and pork products; in the middle there are those that should be consumed every day, such as milk and its derivatives, with aromatic vegetables, herbs and spices replacing fatty sauces. At the base of the pyramid we find the main meals, which should include at least two portions each of fruit and vegetables, of varying colours and varieties, and cereals, preferably whole grain.

Forum in Caceres (Spain)

CIHEAM participated in the European Forum "The Role of women in sustainable development of the rural

environment", which was held in Caceres (Spain) from 27 to 29 April 2010 under the auspices of the Spanish presidency of the EU.

The Forum was organised by the Ministry of the Environment and Rural and Marine Affairs in collaboration with the European Commission and the Extremadura authorities. Discussions were held at different levels and the emphasis was on the role of women, the ways in which the quality of their lives in the rural environment might be improved in the future and the need for progress in gender equality.

The Forum was held in parallel with a technical seminar and a formal meeting, at which delegations from EU member states analysed gender issues in relation to financial support for sustainable development programmes.

For more information:

www.mujerrural2010.es/web_en

The pyramid recommends that abundant quantities of water be drunk, that preference be given to local traditional products and that special attention be paid to agricultural biodiversity and seasonal production. These recommendations appear at the base of the pyramid and, together with physical activity and conviviality, are particularly important additions to the diagram.

According to the pyramid, top psychological and physical form does not only depend on a proper diet but also on light but regular physical activity, and conviviality, ie good company and good humour at the table. It is also necessary to drink 1.5 to 2 or more litres of water per day, depending on age or other personal factors. It is also recommended that wine be drunk in moderation (generally speaking, one glass for women and two for men) during meals and in accordance with social and religious traditions. Olive oil should provide the source of fat and, if eaten raw, should be extra virgin. The use of spices, herbs, garlic and onion is suggested as a possible way of reducing salt (and therefore high blood pressure) and introducing micronutrients and antioxidants in the diet. The latter also give Mediterranean dishes their characteristic regional flavour. Nuts, seeds and olives are an excellent source of fatty acids, protein and fibre.

Another innovative feature of the pyramid is the range of different coloured vegetables: red (e.g. tomatoes), red/purple (e.g. berries, grapes and wine), orange (e.g. carrots, mangoes, pumpkins), yellow/green (e.g. spinach, avocados), green (e.g. broccoli, cabbage) and white/green (e.g. onions and leeks) are the seven "colours of health", corresponding to the different phytochemicals that give fruit and vegetables their specific qualities.

In addition, daily consumption of a variety of fruit and vegetables, raw and cooked, provides a significant amount of highly nutritional elements, which, being low in fat and extremely satisfying, give us greater vitality and improve our well being, while enabling us to limit our calorie intake. Still on the subject of vegetables, recent studies have shown that wild plants are a richer source of nutritive microelements than cultivated plants.

Achieving sustainable food consumption in the Mediterranean Region

At this point we should consider the role that might be played by typical local products and agricultural ecotypes in improving food quality and agricultural biodiversity. They could serve to improve nutrition and promote greater sustainability of production systems and populations.

Genetic diversity can make an important contribution to population subsistence by:

- improving nutrition and health (increasing food and nutritional security, fostering self-sufficiency in food, improving the flavour of food);
- providing income (diversifying output, increasing opportunities for gainful employment);
- empowering women and marginal sections of populations;
- improving the health of the ecosystem (reducing unsustainable farming practices, ensuring sustainability of productive ecosystems, combating harmful organisms, improving health and fertility of soils, conserving the ecosystem, optimising environmental and natural resources);
- promoting culture (helping to preserve the culture, traditions and identity of local populations).

These considerations lead us to the concept of the "sustainable diet", which certain authors (Gussow and Clancy) had already begun to explore in 1986. They actually recommended that we consume foodstuffs according to their nutritional value and the ecosystems they are derived from. With the globalisation of food production and modern agriculture, this idea has been neglected and at the same time we have seen problems related to malnutrition grow worse. If we examine these facts in relation to the alarming rate at which agricultural biodiversity is declining (throughout the world about 300,000 edible plant species, nearly 75% of the total, were lost in the course of the twentieth century. In Italy, only 2,000 of the 8,000 varieties of fruit tree recorded in 1800 still exist. At the present time, 1,500 fruit varieties are threatened) and ecosystems are deteriorating, a review of agricultural systems and diets is imperative.

MAI Chania

The Center for Applied Optimization of the University of Florida and the MAI Chania are organising an International Conference on "Data mining in agriculture and environment", to be held from 1 to 3 July 2010.

The conference is a unique opportunity for specialists from universities and scientific institutions around the world to meet and discuss the latest developments in data mining and knowledge discovery in agriculture and the environment.

Selected presentation from the conference will be published in the International Journal of Agricultural and Environmental Information Systems.

For more information:

<http://www.ise.ufl.edu/cao/CAODM2010/index.htm>

Although the purpose of agricultural systems should be to provide a high standard of nutrition within a sustainable context, the cost of resourcing good diets, their health benefits notwithstanding, can vary considerably. The MD has been analysed from this standpoint and its merits have been highlighted by scientists from a range of disciplines. It is still appreciated as a sustainable diet around the Mediterranean basin, even if, for various reasons, it is less widely propagated nowadays.

The importance of the MD to the rest of the world does not lie so much in its use of locally sourced products and nutritional content as in the methods used to characterise and analyse it and the philosophy of sustainability that underpins it.

It is possible to transpose the same methods to sustainable diets in other ecosystems and food systems and thereby identify new frames of reference to help humanity meet the many challenges now facing it.

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Existing and emerging malnutrition problems in the Mediterranean Region

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At a time when food is an essential factor in maintaining the economic and political equilibrium of states, the threat of famine or malnutrition rests firmly locked away in our minds as if such evils were all in the past. Food-related health problems, perceived as part of a bygone age or a distant future, are therefore spreading in a climate of indifference. Food-related pathologies are nevertheless found everywhere in the world, although they only come to the public's attention in times of crisis or conflict. Moreover, most current developments (globalisation, urbanisation, degradation of the environment, poverty, etc.) are undermining the food security of countries and the social groups that make up their populations. None of the Mediterranean countries is immune to these threats, and while they may differ according to their economic or geographical situation, they also have many points in common.

Malnutrition and health divide

A great many emerging pathologies are food related. The most notable is malnutrition, which may be due to food shortage, food quality or both and which takes three forms. We should leave aside acute malnutrition and famine, since they only occur in the event of war and natural catastrophes, to which most countries in the Mediterranean region are not normally prone. Except where there are food riots (as in 2008 as a result of speculation), armed conflicts and refugee camps (fortunately restricted to specific areas), hunger resulting from insufficient food supply is confined to a few countries in Sub-Saharan Africa and Asia. Of all the developing countries, those in the Middle East and North Africa are the ones where levels of undernourishment are lowest (FAO, 2006).

Malnutrition can also refer to the effects of an unbalanced diet. This type of nutritional deficiency is mainly associated with poverty and is not widely discussed. It is not the sole prerogative of countries in the South but is known to exist in Europe as well. Indeed it is often observed among the elderly, though rarely detected in the rest of the population for lack of official monitoring. The fact remains that deficiencies linked to poverty and precarity are on the increase everywhere, as shown by the rapid expansion of France's "Restos du Cœur" movement, which caters for 800,000 people and distributed 100 million meals during its last campaign. These figures should serve as a warning to the authorities, as should the renewed incidence of scurvy in various places.

In the South, where family solidarity is still strong, it might be supposed that the high rates of infant and maternal mortality are in part linked to poor nutrition during pregnancy and infancy (critical periods for vulnerable populations) in that it makes infection more likely. These observations show that the food divide is as much national as international.

Malnutrition resulting from excess (or overnutrition), which is often aggravated by sedentariness, is regarded as a "disease of civilisation"! This scourge, which manifests itself in overweight and even obesity, can lead to numerous pathologies:

- Non-insulin-dependant or type 2 diabetes, which is strongly associated with overweight. It represents the major component of the world diabetes epidemic and is assuming alarming proportions in several Mediterranean countries (Capron, 2009);
- Cancers are multifactorial diseases but many studies (World Cancer Research Fund, 2007) find that about 30% of cancers are food related and that we could avoid 30 to 50% of them if we varied our diet, had enough of certain foods, such as fruit and vegetables, and not too much of others, particularly meat and fat (NutriNet Santé, 2009);
- High blood pressure, cardiometabolic disorders and strokes are also on the increase and their dietary causes have been amply proven.

In all, disorders associated with bad diet and lack of potable water, taken in conjunction with smoking and alcohol consumption, are responsible for more than 40% of preventable morbidity and mortality in the world in all age groups (WHO, 2009).

While the obesity epidemic is not the prerogative of the Mediterranean – the United States holds the record with over 65% of the population overweight including 30% who are obese (OECD, 2005) – the fact remains that overweight, also increasing rapidly in the region, is more serious in the South than in the North and gets worse the further east you go (CIHEAM, 2008). These developments have to do with the new commodities on offer, which determine consumption patterns and changes in dietary habits. Moreover, in certain Mediterranean countries, and particularly in the Gulf region, a portly figure is regarded as a sign of social success.

Cretan diet dying out

If we compare them with other countries in the world, we find that the tendency in the Mediterranean countries is to abandon the traditional diet based on fruit, vegetables and olive oil, whose benefits have been abundantly described in the literature, and to replace it with standardised food rich in glucids and lipids. The affluent western societies, on the other hand have taken the Mediterranean diet as their own food model. From the environmental standpoint, this development reflects and hastens the changes in modes of agricultural production, the disappearance of food crops and the loss of ecological diversity, which still represents the wealth of the Mediterranean – but for how long?

In the South, the gradual disappearance of the Cretan diet and the parallel emergence of pathologies associated with overweight, accompanying the epidemiological transition, could ultimately compromise the health and economic gains achieved by several countries in the South. In addition to the health challenges there are the financial challenges of maintaining, if not increasing access to health care. More pragmatically, a radical modification of health strategies will be needed in order to contain the explosion in expenditure expected from these developments, which could threaten economic growth.

It is generally accepted that genetic heritage is responsible for about 5% of diseases and that the provision of health care prolongs life expectancy by about 20%. Otherwise, diet and many other factors (social, economic, cultural, etc.), whose effects are not always direct or which only take effect over the long term, play a key role in public health. Food and health education, focusing on prevention, call for a better understanding of the interaction between the behaviour of individuals and their environment.

**Planète
Terroirs**

CIHEAM will be taking part in the 3rd International Forum "Planète Terroirs" in Chefchaouen (Morocco) from 31 May to 2 June 2010. The theme of the forum is "the future needs terroirs" and its purpose is to explore the conditions for the emergence and development of *terroir* projects in the world, with special emphasis on the conservation of diversity.

Around 250 participants with an interest in the institutional and scientific dynamics of local and territorial development will gather from all over the world to pool knowledge, put forward proposals and devise and endorse ways of promoting *terroir* products.

This international event, which is taking place for the first time in the South of the Mediterranean, is being organised under the auspices of Unesco by the Association *Talassetan pour l'Environnement et le Développement (ATED)* and the French Association *Terroirs & Cultures*.

More information at:

<http://planete-terroirs.org/forums/chefchaouen2010>

Water, a source of life under threat

It is not possible to address the problems of nutrition in the Mediterranean without referring to those related to water. Water is both a source of life and also the first cause of mortality in the world in that it may be a vector of infectious pathogens (bacteria responsible for diarrheic diseases, viruses responsible for encephalitis and hepatitis, or parasites) or contaminated with pesticides and chemical and medicinal residues from agriculture and stock breeding. Although water-borne infectious diseases are still rife in the Mediterranean countries, it must be acknowledged that not all countries on the southern shore present the same risks. Water quality may also vary considerably from one agglomeration to another depending on water treatment, and above all between towns and countryside. This observation shows that it is not possible to regard the Mediterranean Region as a single unified area from the health standpoint. On the other hand the entire region is threatened by shortage of water just when demographic growth, urbanisation and agriculture are increasing the need for it. In this context, global warming and drought (like the one that has been raging in the Sahel for two years) threaten to compromise development and equilibrium in these regions, notably by encouraging the emergence of animal diseases that are potentially transmissible to man (Afssa, 2009).

Food divide and food security

While the difference between North and South in terms of the incidence of food-related disease is becoming less marked, there is still a food divide. The North goes in for export production, which is often associated with waste due to overproduction or the vagaries of the local markets. In the south, where agricultural production is in deficit and vulnerable to world exchange rates, losses from poor distribution and conservation networks are the dominant factors. Here inadequate hygiene conditions, still too frequent, are therefore responsible for the pollution and contamination that make food products unfit to eat and threaten consumers with illnesses and shortages. Food security is therefore crucially dependent on production and distribution on the one hand and public health and quality on the other.

Food and prevention

Europe's past is filled with major famines, which have sometimes disrupted the course of history. The Bible tells of the eighth plague of Egypt, a swarm of locusts, which devastated crops and reduced the people to famine. While the famines seem to have disappeared, the locusts return periodically, testifying to the climatic and ecological fragility of the southern shore of the Mediterranean. Today, emerging health threats are added to the ones that have never gone away. In North Africa and the Middle East, the disappearance of famine paradoxically goes hand in hand with an increase in malnutrition. With human health and development balances still unstable, food-related pathologies represent geopolitical challenges, which new cohesive and ethical governance could reduce or even overcome.

Health cannot be improved by fiat, but it is closely related to food security, which is itself an important health determinant and vital to consumer well being. Food, like health, is a fundamental right, recognised by international organisations. Both of them call for the introduction of a chain of responsibilities and a series of complex operations that cut across national boundaries. The non-transmissible, chronic pathologies emerging in the South must be met with renewed cooperation, based on sharing of good practice and experience, and involving public authorities, private businesses and the markets. People need to be fed, but not at the cost of their health. The outlook is disturbing and solutions must be found as a matter of urgency.

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Dr. Jean-Jacques Denis and Nouzha Guessous

MAI Zaragoza

The second meeting of heads of Veterinary Services in the REMESA (Mediterranean Animal Health Network) countries was held in Zaragoza (Spain) from 27 to 30 April under the auspices of the Spanish presidency of the European Union. It was organised by the Ministry of the Environment and Rural and Marine Affairs in collaboration with MAI Zaragoza.

Founded in 2009, REMESA is an international network comprising the countries of North Africa and Southern Europe. Its permanent committee is made up of the chief veterinary officers of the member countries together with representatives of international institutions such as the FAO, OIE, UMA and EU.

The general objective of the network is to improve the prevention and control of animal diseases in the Mediterranean region through regular exchange and sharing of information, harmonisation of surveillance, prevention and treatment methods, and preparation of synchronised emergency response plans.

For more information:

www.fao-ectad-crsa-an.org

Tackling child malnutrition in Egypt

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The context

The global economic crisis and increase in food and fuel prices that is superimposed on the existing poverty and unemployment has heightened Egypt's vulnerabilities and exposed its weaknesses. It diminished the coping capacity of families with limited incomes. Household food security became affected both in quantity and quality. The picture is further complicated by the socio-economic impact of the avian influenza epidemic that is felt in particular by poor families in both rural and urban areas and whose subsistence is in greater part dependent on incomes from home poultry production. Inflation and rising food prices have hit the country at a time when the rates of malnutrition reported in the Egypt DHS (Demographic and Health Survey) of 2000, 2005 and now again in 2008 are on the rise. The change that has been occurring in food behaviour, whether in association with modern lifestyles and food excesses; or with poverty and the consumption of empty calories, has resulted in an increase in diet related diseases such as obesity, type II diabetes, and hypertension in addition to anaemia and other micronutrient deficiencies. This was confirmed in the findings of the 2008 survey where figures for obesity in women aged 15-59 years showed that the majority were considered overweight (28%) or obese (40%). As for men, they were 34% overweight and 18% obese. Obese women were found to be 4 times as likely to be hypertensive and overweight women were twice as likely to be hypertensive with the risk also increasing with obesity and overweight in men.

The manifestations of child malnutrition that have steadily increased over the past decade are more alarming as the high figures for stunting point to long term exposure to a growing number of interdependent causal factors and not only to inadequate food intake. Poor sanitation, food safety risks and unhygienic living conditions top the list. The quality and coverage by public goods and services starting with basic infrastructure services and healthy dwellings continues to lag behind the population needs because of the sheer magnitude of the demand of a population that is steadily increasing. The large numbers of children living under the unhygienic conditions of periurban informal settlements with little or no basic infrastructure services, and the rural sanitation crisis (The Silent Emergency, Egypt Human Development Report 2005) are two examples where the billions that are being spent can only satisfy a fraction of the demand for improved housing conditions and for safe collection, treatment and disposal of sewage in rural Egypt. The association between malnutrition or food deprivation and other forms of deprivation was confirmed in the study entitled, "Child Poverty and Disparities in Egypt: Building the Social Infrastructure for Egypt's Future" (2010) that was undertaken by UNICEF, and the Center for Economic and Financial Researches and Studies (CEFRS) of Cairo University. The study investigated multidimensional deprivations among children and calculated the various dimensions of child deprivation through analysis of the datasets of the Household Income and Expenditure Surveys of the Central Agency for Public Mobilization and Statistics and the Egypt Demographic and Health Surveys. Severe food deprivation - measured by using data on severe anthropometric failure* in children under the age of five is estimated to affect 17 % of children under five years, representing 1.5 million children under the age of five who are severely food deprived.

These severely deprived children are at a greater risk of impaired development and opportunities for realizing their full developmental potential are compromised. The growing scientific evidence that nutritional problems of early childhood (from conception to 18-24 months) are at the origin of nutrition related chronic non-communicable diseases of adult life requires that protective measures and preventive interventions must necessarily target that critical period of the human life cycle. Furthermore, if left untreated, the impact of a condition such as iron deficiency anaemia which is known to impede child development is not readily reversed by iron therapy (Grantham-McGregor et al, 2007). The focus of the present paper on child malnutrition, in particular on early childhood, is but a reflection of the importance given to that period in the multipronged and multidisciplinary integrated approach that aims to improve child nutrition and preserve the human capital of the nation, its children.

* The severe deprivation indicator is the proportion of children under five years of age whose height and weight for their age are below minus three standard deviations of the median of WHO Child Growth Standards, 2006.

**MAI
Montpellier**

The Mediterranean Agronomic Institute of Montpellier is the technical and scientific coordinator of the "NOVAGRIMED" (Agricultural innovations in Mediterranean areas) cooperation project, which seeks to encourage partner regions to support their agricultural sectors by embracing innovative policies. The object is to further the sustainable development of Mediterranean agriculture and make it more economically competitive.

The partner regions are Provence-Alpes-Côte d'Azur in France (the coordinator of the project), Sardinia and Puglia in Italy, Thessaly in Greece and Murcia in Spain.

www.iamm.fr

Evolution in the nutritional status of children in Egypt over the past decade

Egypt has made significant advances in improving the health of Egyptians over the past half a century as is evidenced by improvements in the under 5 years child mortality rates from just over 240 per 1000 births in 1967 to 28 per 1000 births in 2008 (EDHS 2008). However, it is the quality of life of the surviving child that is now at stake. The downward trend in malnutrition has reversed in recent years and malnutrition is one of the few childhood indicators that have shown deterioration (El-Zanaty and Way, 2009). Comparison of the findings of the DHS 2000, 2005 and 2008 demonstrates the trend in the evolution of malnutrition in Egypt. Figure 1. presents recent trends in the nutritional status of children in Egypt using anthropometric data from DHS surveys undertaken between 2000 and 2008 and the WHO Child Growth Standards. The survey results suggest that while the nutritional status of young children in Egypt remained relatively unchanged during the period between the 2000 and 2005 surveys, in 2008, however, the prevalence of stunting increased to 29 percent.

The proportions of children who were found to be wasted and underweight were also higher in 2008 than in either of the two earlier DHS surveys. The reasons for the increase in malnutrition among young children levels require further investigation; however, one factor which may in part be responsible for the increase was the abrupt disruption in the supplies of poultry and eggs that followed the culling of millions of chickens and other birds in response to the avian influenza outbreak Egypt which started in 2006. The FAO assessment of the socio-economic impact of the avian influenza epidemic on vulnerable households (FAO, 2009) found that the culling had a significant and sustained impact on household consumption of poultry and eggs, especially for young children, and also put considerable strain on household financial resources since home poultry sales accounted for nearly half of the incomes of many Egyptian households prior to 2006.

Fig. 1: Trend in nutritional status of young children
WHO Child Growth standards



Source: EDHS

Note: data are for the children under the age of 5 years whose nutrition status measure fell below 2 Standard Deviations from the WHO Child Growth Standards.

Regional disparities are found to be moderate for wasting and underweight, but are significant in terms of stunting. Stunting levels range from 22 percent in urban governorates to 39 percent in urban Lower Egypt. This is almost 20 percent higher than rural Lower Egypt, where EDHS 2008 has shown that most child well-being indicators are worse than the national average.

MAI Zaragoza

The "Marketing of organic products" course will be given from 18 to 22 October 2010 at MAI Zaragoza. The objectives of this Advanced course for professionals are as follows: to give a comprehensive overview of the development and present structure of the organic sector; to highlight prerequisites and special requirements for marketing organic products and to provide practical experience.

Organic agriculture provides opportunities for furthering rural development, improving food quality and protecting the environment. The market in organic products has expanded steadily over the past decade and is now a growth market. The object therefore is to give professionals a sound knowledge of the specific features and requirements of the organic sector so that they can develop it in the Mediterranean countries.

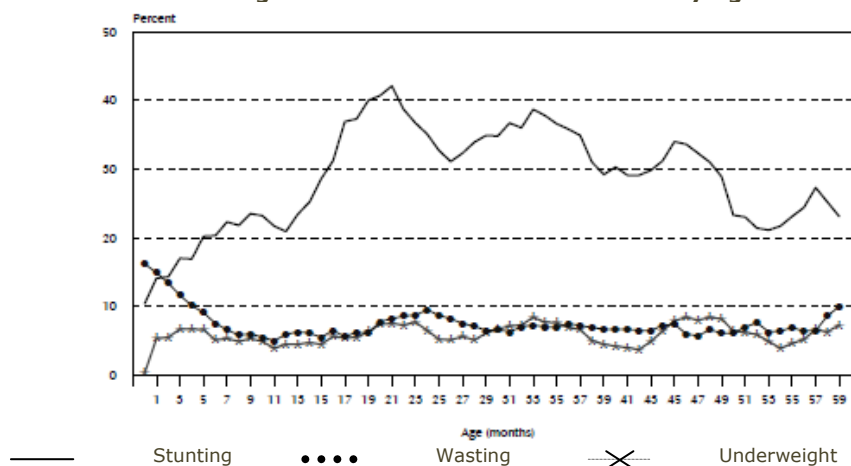
More information at:

http://www.iamz.ciheam.org/en/pages/paginas/pag_formacion6.htm

It is suggested that the rapid increase in child stunting in Lower Egypt, observed between 2005 and 2008, may be in part related to the extensive culling of poultry that was undertaken in the first year of the avian influenza epidemic. What was new in the 2008 findings is that in contrast with other regions, stunting levels in Upper Egypt declined modestly throughout the same period from 32% to 26%. Variations of stunting with age showed a rise in stunting that was highest among 12-23 months old children and that boys had a significantly greater chance of being stunted than girls (see Figure 2).

The analysis of the associations between deprivations in the above mentioned Child Poverty study has revealed the association of manifestations of malnutrition with sanitation and shelter deprivation and that increasing wealth had a protective effect.

Fig. 2: Nutritional Status of Children by Age



Source: Egypt DHS 2008

Note: Stunting reflects chronic malnutrition; wasting reflects acute malnutrition; and underweight reflects chronic and acute malnutrition or a combination of both.

Levels of anaemia among children 6 to 59 months

The results for anaemia investigated in the EDHS 2005 showed that overall, one in two children suffer from some degree of anaemia and that about one in five are moderately anaemic. Comparison with the 2000 EDHS results of anaemia among 6-59 months old children showed that the level of anaemia rose from 30% to 49% in EDHS 2005. The changes affected the mild and moderate anaemia with less than one percent being found to be severely anaemic. Further investigations are needed to explain the underlying causes of e anaemia that was found to cross socio-economic barrier and was not limited to poor households.

On child feeding practices

The findings on breast feeding (BF) in the EDHS 2008 showed that though the habit is nearly universal in Egypt, it was noted that the BF practices applied to the new born immediately following birth are not optimal, with the babies receiving some type of liquid (often under doubtful hygienic conditions) while awaiting the mother's milk flow to start. Exclusive breast feeding during the first 6 months was not strictly followed with only 29% of babies being exclusively breast feeding for the first 4-5 months. Seven in ten babies received some form of supplement by the age of 4-5 months. Complementary feeding was found to begin too soon and was insufficient in terms of both frequency and diversity for many children. The 2008 survey also reported that more than 40% of infants and young children do not have a sufficiently diverse food intake nor are they fed an appropriate number of meals during the day. As for the feeding practices during illness, they were not found to be adequate for many Egyptian children.

Rising to the challenge

The creation of the Ministry of State for Family and Population (MOFP), with its specific triple mandate for policy formulation, coordination and advocacy, "nutrition" has found a strong ally to overcome the important undermining constraint, namely, the absence of an integrated nutrition policy and programme that coordinates the input of a wide base of different sectors and other stakeholders.

MAI Chania

The International Honey Commission (IHC) organised a "Symposium on Authenticity and Quality of Bee Products" and the "2nd World Symposium on Honeydew Honey" at MAI Chania from 7 to 10 April 2010.

The aim of the symposium was to pool knowledge on honeydew honeys, enrich the understanding of the insects that produce honeydews and validate the quality and authenticity of bee products.

The 12th International Symposium on Soft Insects was also held at the same time and place. It was therefore possible for members of the IHC to participate in a common session with entomologists who study insects that secrete honeydew and learn about the physiology of honeydew secretion, the biology of the insects in question, and other important matters.

For further information:

<http://www.honeydew-symposium.gr/>

This coincides with the establishment, last fall, of a high level ministerial coordination body to support the implementation of the national nutrition plan with the membership of the Ministers of Health, Social Solidarity, Education, Agriculture, and the Environment, the technical leadership retained by Health.

Backed by the legal framework of the recently adopted rights based Child Law (June 2008) and the social reform of the Ministry of Social Solidarity and its social protection systems that target families in need, the MOFP also draws on other initiatives such as the Child Rights Observatory. The latter is a joint effort between the Information and Decision Support Center (attached to the Prime Minister's Cabinet), the National Council for Childhood and Motherhood, and UNICEF. The Child Observatory will, by the end of the current year, be in a position to monitor and evaluate the situation of child rights across the country. Poverty alleviation programs and well targeted social safety nets, such as the food subsidy system and the conditional cash transfer programme are expected to improve household food security and the nutritional status of children. Ongoing reforms include an economic policy favouring employment and economic growth, as well as an education reform that gives priority to the education of girls, and a health reform that focuses the outcome of pregnancy and early childhood within the Family Health Programme and its basic package of preventive services. All converge towards a potential contribution to improving the nutritional status of the Egyptian child. Equally important, is the recent UNICEF agreement to undertake the analysis of Egypt's capacity to accelerate action for improvement of nutrition status. This investigation will contribute to the diagnosis of the institutional and operational weaknesses and strengths and will allow the bridging of gaps and strengthening of weaknesses before embarking on a national programme that coordinates, for the first time a multisectoral vision of the nutrition problems that affect children in Egypt and that goes beyond the boundaries of a health alone intervention.

A high level Consultation on Child Malnutrition

Cognizant of the seriousness of the situation, the Minister of State of Family and Population organized last March 2010 an expert consultation that grouped together experts from sectors and disciplines involved in nutrition work in the country to propose and discuss a programme for immediate action. The US AID was invited to present the findings of the additional in depth analysis of the findings of the Egypt DHS 2008 which served as the basis for discussions. The outcome of the meeting will be taken into consideration for formulation of an intersectoral action plan.

There was consensus on two priority actions. Firstly, the update of the national nutrition plan that had been conceived before the avian influenza epidemic, to better address the impact of the epidemic; and secondly, the UNICEF assessment of the country's capacity to accelerate programmes in nutrition. The experts gave importance to community level interventions and to appropriate communication strategies, taking advantage of the outreach community health workers who proved their worthiness within the framework of the avian influenza communication and education programme. An important supportive and enabling issue was the insistence that family level nutrition improvement initiatives be accompanied by income generation activities and inputs that target the empowerment of women so that they are better prepared to assume the responsibilities expected of them. Integration of a nutrition dimension in the strategic plans of concerned ministries, the establishment of a food intake and child nutrition surveillance systems, as well as seeking partnership with civil society are some of the recommendations of the meeting. There was convergence of opinion on the need to concentrate inputs in actions with multiplier effect rather than spend time on pilot projects that are costly in effort and money as well as limited in coverage and impact.

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Habiba Hassan-Wassef

MAI Bari

Since February 2010, CIHEAM-MAI Bari has been coordinating two rural and agricultural cooperation projects with Syria. Financed by the Development Cooperation Department of the Italian Ministry of Foreign Affairs, these projects are intended to support the country's agriculture and improve its food security.

The first, "Territorial enhancement and socio-economic support for rural communities in the archaeological town of Ebla, Syria", seeks to implement an integrated territorial development plan designed to improve conditions of life in rural areas adjacent to the town.

The goal of the second one, "Rationalisation of use of natural resources to improve agricultural production in Syria", is to make better use of water resources and modernise production systems, notably in the wheat and cotton production chains. This project constitutes a new phase of the cooperation programme "Rationalisation of irrigation systems in Ras El Ain", which MAI Bari is already working on in Syria.

www.iamb.it

New food policies in the Mediterranean Region

Martine PADILLA

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Hidden malnutrition in the Mediterranean: similar pathologies in the North and the South

Epidemiological studies have revealed that the increase in longevity and fall in mortality have been more marked in the Mediterranean countries than in the English-speaking and northern European ones. In 20 years, average lifespan in the southern European countries has increased by nearly seven years compared with only four in the North (UNDP, 2007). These effects have been widely attributed to the special features of the diet consumed on the northern shore of the Mediterranean in the 1970s. On the Southern shore, active policies of allocating massive subsidies for food, together with progress in hygiene and education, have served to prolong life expectancy.

However, the accession of certain northern Mediterranean countries to the European Union (EU) and the economic liberalisation of the southern countries have drastically changed the landscape. The adoption of "modern" ways of life and habits has produced new "civilisation risks", which add to the risks arising from underdevelopment. Today Mediterranean countries as a whole are faced with the growing challenge presented by the relative imbalance between available food supplies and the substantial fall in the energy needs of individuals who have adopted a largely sedentary lifestyle. This unstoppable trend is normally associated with a badly balanced diet that is high in saturated fats (with partially hydrogenated lipids), fast absorption sugars (notably added sugar in drinks), salt and refined glucids, but deficient in fibre (often as a result of reduced fruit and vegetable consumption) and hidden micronutrients. The upshot is an increase in obesity and chronic food-related diseases, such as type II diabetes and cardiovascular diseases, as well as pathologies associated with nutritional deficiencies.

The Mediterranean countries are, for example, affected by obesity (body mass index >30). This scourge currently affects nearly 30% of Greek women, 35% of Maltese men, 21% of Spanish adults and 17% of French adults, while overweight affects about two thirds of the adult Egyptian population. Obesity is gaining ground rapidly, as in Morocco, where its incidence among adults rose from 5% in 1985 to 20% in 2005. At the same time many people are found to suffer from underweight, in the North as well as the South. In France this problem affected 5% of women and 9% of 3-17 year olds in 2005, while in Morocco "only" 5% of adults were underweight in 2000.

As to vitamin and mineral deficiencies, 48% of Algerian and 41% of Moroccan children are deficient in vitamin A, while 49% of Algerian, 31% of Moroccan and 26% of Tunisian women are deficient in iron (compared with 2% of French women). According to Planells (2003) Spanish women are deficient in vitamin B6 (17%), vitamin B12 (5%) and folates (23.5%). Clearly then, in many respects the North and South of the Mediterranean present similar, concomitant pathologies.

Are changes in eating habits responsible for the current situation?

It is often said that the spread of non-transmissible chronic diseases is closely linked to trends in individual eating habits. With the improvement in incomes and growing urbanisation, people naturally tend to prefer high energy foods that are rich in lipids and simple sugars because they are more palatable. Admittedly, rising incomes, particularly in towns, has led to a general improvement in food in terms of energy content and variety. But on the other hand, the more societies abandon traditional food in favour of "modern" food (rich in processed and industrially produced items and lending itself more readily to the "fast food" culture), the more pronounced the changes in nutrition and health will be.

Towns should be regarded as prime factors in this change – and hence in the current epidemic – for a number of reasons: they provide access to a varied, abundant food supply, they expose individuals to the pressures of the commercial media in all its forms (advertising and marketing), they make forms of consumption seem more glamorous by association with the modern urban lifestyle, and they offer new or additional "temples" to food (supermarkets and hypermarkets). The consumer's environment accordingly prompts changes in his behaviour. Moreover he is no longer in control of what is put on his plate: knowing nothing of the culinary processes involved, he does not know what the food consists of.

CIHEAM - IMC

In 2008, CIHEAM and MAI Bari embarked upon a new collaboration with the Mediterranean Institute of Certification (IMC) and the Italian Rifosal Consortium on a series of Mediterranean study days devoted to food safety and security.

Five meetings were planned, with CIHEAM playing an active role in each of them (preparing the programme, choosing speakers or presenting papers).

The fourth of these meetings was organised with the aid of the Turkish authorities in Istanbul on 16 April 2010 and focused on organic agricultural products.

For more information:
www.imcert.it

What policies are being implemented to correct these trends?

In the southern Mediterranean, awareness of the phenomenon of food change has come rather late. For a long time governments subsidised energy dense products (white flour, white bread, blended oils) at the expense of nutritionally dense ones (fruit and vegetables, pulses, and olive oil, for example).

Today they continue to set store by a portfolio of measures directed towards the immediate and underlying determinants of malnutrition. It is still recommended that these "direct" measures be given priority since they have proved their effectiveness in overcoming the problem of slowed development in children, which is still very serious in the Mediterranean. They include encouraging breast feeding, supplementing vitamin A and zinc intake, increasing the iron content of food and iodising salt. These "direct" actions have been promoted internationally (see table below).

Examples of tried and tested "direct" measures

Measures to be applied in countries affected by slow development in children	Measures to be applied depending on the context
<ul style="list-style-type: none"> - Iodising salt - Supplementing mothers' intake of folate/iron, calcium, and multiple micronutrients - Encouraging breast feeding - Encouraging mothers to adopt new forms of supplementary feeding - Supplementing zinc intake, supplementing/increasing children's and babies' vitamin A intake - Using zinc to treat diarrhoea in children and babies - Treating severe acute malnutrition - Taking steps to reduce tobacco consumption and pollution of indoor air - Taking steps to improve child or baby hygiene (including washing of the hands) 	<ul style="list-style-type: none"> - Supplementing mothers' intake of energy, balanced proteins, iodine - Deparasiting - Impregnating Mosquito nets with insecticide - Providing intermittent treatment to prevent malaria - Providing neonatal vitamin A supplements - Delayed umbilical cord clamping - Implementing conditional cash transfer programmes (for training in nutrition) - Supplementing/increasing children's and babies' iron intake

Source: Document d'orientation stratégique: Nutrition dans les Pays en Développement, AFD, Delpeuch, 2009

To the North of the Mediterranean we are entering an age in which the emergence of chronic food-related diseases among older people seems to be declining and the growth in obesity among young people seems to have stabilised. This new situation appears to be due to a series of food policies implemented on all fronts.

Opinions are divided over the question of responsibility for the health effects of dietary habits (Kersh 2009). One school of thought emphasises the individual responsibility of consumers while the other highlights environmental determinants. Policy measures that have set out to modify individual behaviour have long focused on individual factors, such as improved knowledge, intentions, attitudes, motivations and tastes. Over the past few decades a more "ecological" approach to eating has emerged, and we are witnessing an exponential increase in studies on the link between the consumer's day-to-day environment and his behaviour. In the same spirit, measures have been directed towards the individual's environment, in the hope that his behaviour will thereby be modified. Those responsible for public health are still wedded to the basics of traditional political thinking, which focus on reducing the risks facing individuals. According to this outlook, the risk does not derive from the sovereign decision of the individual consumer but from the environment.

The measures thus fall into three categories (Padilla, 2008):

- those intended to modify behaviour by targeting the individual, his preferences, motivations and choice (demand);
- those that affect the consumer's environment and give him access to good quality products (supply), the prevailing idea here being that food choices are (at least in part) determined and influenced by market forces and are beyond the capacity of the individual consumers to control; and
- combinations of the two, targeting both the individual and his environment.

CIHEAM-FAO Cooperation

From 14 to 16 April 2010, CIHEAM participated in the Mediterranean Forest Week organised by the FAO (Silva Mediterranea) and EFIMED (Mediterranean Regional Office of the European Forest Institute) in Antalya (Turkey). The event was attended by experts from a number of neighbouring countries and from international organisations.

The experts drew attention to the main challenges posed to woodland and other natural land areas by the institutional, environmental, social and economic context in the Mediterranean (climatic tensions, urbanisation, industrialisation, tourism, etc.). They called upon the Union for the Mediterranean to take action to protect Mediterranean woodland and enhance its role in the sustainable development of rural territories.

For more information:

www.efimed.efi.int

All these measures can be applied across the board (ie to all individuals without distinction) or more selectively (to high risk groups; in the workplace, in schools or in communities), or to precise target groups (individuals who already have a food-related pathology).

Another way of classifying measures is by the level at which they are implemented: public level (state, regional authorities), private level (professional farmers' associations, industrial or major retailing companies), or concerted voluntary level (between public authorities and private companies).

A set of 15 distinct but complementary measures might be envisaged. They would be directed either towards the individual consumer or towards his environment.

- (1) Providing individual therapeutic education in the event of a food-related syndrome.
- (2) Providing collective nutritional education to improve knowledge of product characteristics and food and nutritional balance and to give advice on eating habits.
- (3) Conducting nutritional information campaigns and promoting the use of food pyramids as guides to "good conduct".
- (4) Regulating nutritional labelling to ensure that the consumer is given information about the content of the product.
- (5) Making more people aware of the "five fruit and vegetables a day" recommendation, as put forward by the WHO and the FAO.
- (6) Applying pressure on the family environment, which is where the child's tastes are primarily educated and formed.
- (7) Facilitating access to "good products" in collective establishments (schools, cafeterias, hospitals, etc.). Indeed, such establishments are increasingly taking over from the home as food providers and would make excellent food education and information centres.
- (8) Restricting access to certain products by reining in the widespread practice of rewarding schoolchildren with sweets and limiting the number of vending machines providing unhealthy food and drinks in collective institutions (France, for example banned all such machines from primary, secondary and high schools in 2005). A debate has also begun on the presence of fast food outlets near schools, for it is recognised that obesity among school students is directly related to the availability of fast food in the vicinity of schools.
- (9) Controlling prices by taxing unhealthy foods and subsidising healthy ones, such as fruit and vegetables, or fish (although nutritionists agree that there is no such thing as a "good" or "bad" product).
- (10) Providing for direct food aid, in the form of vouchers, for example, so that the underprivileged can afford good quality food.
- (11) Monitoring advertising.
- (12) Getting industrial suppliers to agree to significantly improve the nutritional quality of their products.
- (13) Doing something about portions and packaging. Portions sold or served in restaurants are increasingly copious, which means that even larger quantities are ingested.
- (14) Cultivating healthy communal habits so that individuals are not isolated and are given help in choosing food.
- (15) Ensuring that associated policies are consistent with and conducive to good eating habits.

There is considerable scope for action. All that is needed is the political will to bring about a significant change in food supply and factors that determine consumer choice. Making the individual bear the full weight of responsibility will further increase his sense of guilt and thus make matters worse. Other indirect approaches exist, assuming that decision makers are prepared to use agricultural, industrial, commercial and social policies as a means of ensuring food security in qualitative and above all quantitative terms.

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Martine Padilla

Interview

Paolo Maria Tafuri

Director General of Danone Djurdjura Algeria

Q: Thanks to the liberalisation of trade, Algeria has succeeded in eradicating the phenomenon of undernutrition. But as an economic player operating in the agrifood field, do you not think that by flooding the national market with food products of a different origin you are helping to make the local diet even more unbalanced?

For some years now, Algeria has been experiencing a very marked food transition and the changes have been drastic. The findings of a national inquiry conducted by the National Public Health Institute (INSP) confirm the growing tendency among Algerians to overindulge a taste for fatty, sugary foods. It is obvious that excessive consumption of fats, whether vegetable or animal, could be at least partly responsible for the problems arising from the food transition the Algerian population is currently experiencing. But it must also be acknowledged that the opening up of the market has improved food quality, whether by introducing products that comply with universal standards or by encouraging competition, which has prompted traditional operators to take a more innovative approach. The opening up of the market has therefore brought benefits and problems.

Q: Is the traditional Mediterranean diet still relevant to Algerian eating habits?

Traditional Mediterranean food is particularly rich in cereals, fish, vegetables, fruit and dairy products. But we find that consumers are turning away from this model as new types of diet become available. All studies carried out confirm that they are increasingly inclined to eat red meats in preference to the more traditional cooked food items. The studies show that, among other things, the daily food intake of the average Algerian is not in line with universal health recommendations, being very low in fruit, vegetables and dairy products and high in fat and sugary items. This observation alone confirms that the Mediterranean diet has been abandoned by the Algerian consumer with negative effects on health.

Q: Indeed, a great many health specialists have established a link between new dietary habits and the increase in such conditions as high cholesterol, high blood pressure and obesity and even in cardio-vascular diseases. What do you think?

It is quite clear that diet and health are directly related. Scientific studies are increasingly highlighting the emergence of new chronic pathologies due to changes in diet entailing higher consumption of fats and sugary products. All regions of the country have unfortunately recorded a steady annual rise in the prevalence of the aforementioned diseases, particularly among adults and elderly people and the observations made in a study conducted by the Institute of Public Health clearly illustrate the extent of these diseases. It shows that Algerians no longer suffer from under-nutrition but that on the contrary 21% of people over 35 are obese and 56% are overweight. The study also observes that "Algerians eat badly in that their diet is too rich in fat and sugar". In terms of morbidity, high blood pressure affects 25% and diabetes affects 12% of this age group. We must do more than treat these diseases as they emerge; rather we should concentrate on the causes and ensure that consumers have healthy balanced diets. There is also a need for an effort to increase awareness, so that consumers understand the health risks associated with this change in dietary habits. To that end it will be necessary to work in cooperation with the public authorities, private agrifood operators, experts and public health specialists.

Q: Are imported food products, whether vegetable or animal, in compliance with required quality standards and able to provide a diet that promotes public health?

It is difficult to evaluate the quality of imported products as a whole. The question is one for the public authorities to whom the task of monitoring the nutritional status and health of populations falls. But as to our own sector of operation, the dairy sector, it must be borne in mind that five or six years ago, the bulk of our raw materials, mainly powdered milk and packaging material, was imported.

Terramed 2010

On 14 April 2010, CIHEAM and MAI Zaragoza presented the *Mediterra Atlas* at an event in Madrid marking the publication of the Spanish version of the report: *Terramed*. This is the fourth Spanish edition of *Mediterra*, which is published with the aid of the Spanish Ministry of the Environment and Rural and Marine Affairs (MARM).

At the press conference, Santiago Menéndez, Under-Secretary of State at MARM, said that this new publication was fully in line with CIHEAM's vocation, namely to contribute to multilateral cooperation on Mediterranean food and agricultural issues through its education and research operations.

Today we are making strenuous efforts to source as much raw material as possible locally. This means that we use only fresh milk in our processing operations and obtain raw materials for packaging from domestic suppliers. At present, imported products account for no more than 50% of our raw material, although there are some items, like sugar, for which we are still largely dependent on imports. But generally speaking it is our policy to give priority to locally sourced raw materials, always assuming of course that they meet the required standard of quality, and thereby provide the consumer with products of high nutritional value. Having said that, the authorities have put in place an "adequate monitoring" system, which provides for the inspection of all imported food products as well as documents attesting to their origin and health certificates.

Q: Returning to dairy products, of which Algeria is one of the world's leading consumers, how would you assess them in terms of quality?

If we consider the overall quality of the foods on offer, we can certainly say that appreciable progress has been made in the dairy sector, particularly in processing. On the other hand our experience in the field has convinced us that real improvement in the quality of dairy products can only be guaranteed by increased use of local raw materials, ie locally produced fresh milk, and less reliance on imported milk powder. In this connexion I would like to remind you that when it first established itself in the Algerian market the Danone group used only powdered milk to produce the entire range of its products, like all operators in the dairy sector. This method is considered more rational and more economically advantageous as the powder can be imported at low cost from the international market. But this approach is not compatible with the normal strategy of Danone, whose corporate DNA requires that we work with fresh milk. It should be pointed out that Algeria is, unfortunately, an exception, being the only country in the world where most of Danone's products are still made with powdered milk. In any event, the Danone group has now set out to reverse this tendency. Today fresh milk accounts for 35% of the raw material used by Danone in Algeria and we plan to continue the process of replacing powder with fresh milk until, in the long term, we achieve the goal of producing 100% fresh milk Danone products here.

Interview by Mohamed Naïli

Journalist (Algeria)

News in Brief

Good cereal harvests continue worldwide: close-up on Algeria

The International Grains Council (IGC) publishes a monthly information bulletin on the world situation and outlook for cereals production and consumption. In its latest report, published on 25 March 2010, the IGC said that estimations for cereals production in 2009-2010 showed that the balance between world supply and demand was still widening, as it had been since 2007. Estimated output for 2009-2010 is thus 1,776 million tonnes, slightly down on the previous year when output was 1,796 million tonnes. At the same time estimated consumption was 1,747 million tonnes, higher than the previous year, notably because of high industrial use, which absorbed the fall in feed consumption. On the other hand stock estimates of 394 million tonnes were up, amounting in concrete terms to 29 million more than at the end of 2008-2009. Moreover, large cereal harvests are expected in 2010, with a record level of maize production but a fall in wheat and barley output. World cereal production in 2010-2011 should therefore be in the region of 2,158 million tonnes.

As far as wheat is concerned, the hotter weather has favoured the development of winter crops throughout a large part of Europe and recent rain in North Africa and the Middle East has improved the outlook for wheat in the region in 2010. World wheat consumption is expected to increase by 2% to a record 656 million tonnes, taking food, feed and industrial uses into account.

One of the new developments of 2010 has been the change in the status of Algeria, which has become a cereals exporter thanks to an excellent 2008-2009 season, in the course of which it harvested 11 million tonnes of barley. This record output will cover domestic requirements for the next three years, while at the same time substantially reducing the cereals bill. The Algerian Inter-professional Office of Cereals (OAIC) has been authorised by the Ministry of Agriculture and Rural Development to export part of its 2009 barley production (about 0.3 million tonnes). The ministry explained that this export could take the form of an exchange for soft wheat, which Algeria still imports.

MAI Montpellier

On 3 and 4 May 2010 a meeting was held in Brussels to launch "Sustainmed". This project, part of the 7th European Framework Programme (FP7) is coordinated by MAI Montpellier. It addresses "Sustainable agrifood systems and rural development in Mediterranean countries".

The object is to assess the impact of the agricultural and trade policies pursued by the Mediterranean Partner Countries (MPCs) and the European Union on the MPCs themselves.

It involves thirteen research teams (from Morocco, Spain, Tunisia, the United Kingdom, Greece, Finland, Italy, Syria, Egypt and Turkey) and will last until February 2013.

www.iamm.fr

The countries targeted for this exchange include Algeria's traditional cereals suppliers: the European Union, the United States and Canada. Algeria has not sold its output on the international market since 1970: the former "breadbasket of Rome", the country had seen a decline in its agriculture since independence and had been importing massive amounts of cereals to cover its soft wheat and barley requirements. It now seems to have become self-sufficient in soft wheat and barley (imports have fallen by 80%), partly as a result of reforms introduced since 2001 as part of the National Agricultural Development Plan (PNDA). The political will still appears to be strong, with the government of Ahmed Ouyahia announcing an investment programme of €1.3 billion, the equivalent of the savings made from the reduction of food imports. The money is to be spent on building silos, thereby doubling the country's future storage capacity.

Olive oil in China and the world

New markets are at stake for Tunisian olive oil: 135,000 bottles of Tunisian olive oil produced by Poulina Holding Group are indeed on their way to China. For the first time thus, Tunisian olive oil will compete with Italian and Spanish olive oil on the Chinese market. A pending authorization is still awaited by Poulina, which would then allow the Tunisian olive oil to be sold under the brand "Vitalia". Poulina has started the construction of an olive oil processing plant in 2009 not too far from Shanghai. The production of olive oil is a major activity in Tunisia, a country which has long been specialized in olive oil production dating back to the Roman imperial age. 200,000 tons of olive oil were produced in 2008 and olive oil represented 41% of the value of food-agricultural exports. The olive is currently grown in many regions of the world, namely Australia, the United States, South Africa and Argentina, given its numerous proven nutritional and health benefits. The Mediterranean nevertheless stands for the region in which olive trees are grown the most (with some 8 million hectares under olive cultivation) as it has an intrinsic link with its history and climate. Spain is the leading world country with 2.3 million hectares under olive cultivation, followed by Tunisia (1.5 million hectares), Italy and Greece. Spain, Italy, Greece, Turkey, Tunisia and Syria thus account for 88.5% of world olive oil production.

The output of Spain, Italy and Tunisia increased steadily from 2000 to 2008. These improvements were made possible by European Union cooperation and aid leading to an improvement in yields per hectare through enhanced mastery of the technical aspects of olive growing. The cultivation of the olive tree is mainly devoted to the production of olive oil, as the latter is more profitable than the production of table olives which are still harvested by hand, thus hindering its growth.

China also produces olive oil, which is becoming more and more popular among the Chinese, although its consumption is still minimal compared with vegetable oil. This is mainly due, according to the 6th China International exhibition of Olive Oil and Edible Oil reports, to the fact that the output of domestic olive oil in China is very small. Indeed, olive oil mainly relies on import, making the cost much more expensive than vegetable oil, and there is a general unfamiliarity of olive oil among consumers. However, the import volume of olive oil is said to have increased by 70% annually on average, with the major import countries being Spain, Italy and Greece, who occupy respectively 40%, 30% and 20% of the total import volume.

Publications

Pierre Bonte, Mohamed Elloumi, Henri Guillaume and Mohamed Mahdi (dir.), *Développement rural, environnement et enjeux territoriaux. Regards croisés Oriental marocain et Sud-Est tunisien*, Cérès Éditions, Tunis (Tunisia), 2010

FAO, *The state of food and agriculture 2009. Livestock in the balance*, Rome (Italy), 2009

World Food Programme, *Climate change and hunger*, Rome (Italy), 2009

Jean-Christophe Bureau et al., *Nourrir les hommes. Un dictionnaire*, Ed. Atlande, Col. Références, Paris (France), 2009

IFOAM, *The World of Organic Agriculture 2010. Statistics and Emerging Trends 2010*, Bonn (Germany), 2010

Hélène Franconie, Monique Chastanet and François Sigaut (dir.), *Couscous, boulgour et polenta. Transformer et consommer les céréales dans le monde*, Khartala, Paris (France), 2010

Stephen McIlwaine and Mark Redwood (eds.), *Greywater use in the Middle East. Technical, Social, Economic and Policy Issues*, CSBE/IDRC, Ottawa (Canada), 2010

Mercasa, *Alimentación en España 2009, Producción, industria, distribución y consumo*, Mercasa/MARM, Madrid (Spain), 2009

OECD, *Sustainable Management of Water resources in agriculture*, OECD Publishing, March 2010.

Guillaume Duteurtre and Bernard Faye (coord.), *L'élevage, richesse des pauvres*, Ed. Quae, col. Update Sciences & Technologies, Paris (France), December 2009

WHO/UNICEF, *Progress on sanitation and drinking water 2010 update*, Geneva (Switzerland), 2010

Events

21-24 June 2010 - Alexandria (Egypt)

The 3rd GID-Parmenides Conference of the Mediterranean Area of Sciences on "*Richness and Mediterranean Diversity, Biology and Culture*", under the auspices of the Bibliotheca Alexandrina and the Academy of Science.

28 June - 1 July 2010 - Montpellier (France)

International conference on "Innovation and Sustainable Development in Agriculture and Food".

31 August - 16 September 2010 - Dalyan (Turkey)

The Medcoast Institute is holding its 8th International Training Workshop on "Integrated Coastal Management in the Mediterranean and the Black Sea".

4 - 7 October 2010 - Madrid (Spain)

The European Congress "Towards agro-environmental, climate and energetic sustainability", organised by the Spanish Conservation Agriculture Association/Living Soils and the European Conservation Agriculture Federation.

11-13 October 2010 - Tlemcen (Algeria)

International Symposium on "The management and conservation of continental biodiversity in the Mediterranean Basin" organised by the University of Abou Bekr Belkaid.

19-21 October 2010 - Tabarka (Tunisia)

International conference on "Sylvo-pastoral resources and sustainable development in the Mediterranean".

21-23 October 2010 - Athens (Greece)

Forum international on diabetes and obesity, organised by the Institute Diabetes and Obesity based in London and Athens.

The Watch Letter

Every quarter
CIHEAM issues its Watch
Letter in English and
French.

The next issue will be
published in
September 2010 and
will be devoted to
"Women in
Mediterranean rural
areas".

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Recent publications

CIHEAM Analytical Notes

- *Water resources management in Algeria: the limitations of a supply-based policy*, by Mohammed Benblidia and Gaëlle Thivet, No 58, May 2010.
- *Current events in Mediterranean Agriculture, January - March 2010*, Ciheam, No 57, April 2010.
- *Impacts of climate change on agriculture in Morocco and Tunisia and adaptation priorities*, by Mélanie Requier-Desjardins, No 56, March 2010.

CIHEAM Briefing Notes

- *Rural women and agriculture in the MENA*, by Karine Badr, No 66, May 2010.
- *The Mediterranean Diet. A common wealth and a sustainable development model for the Mediterranean*, Ciheam, No 65, April 2010.

NewMedit

- Summary of the 01/2010 edition of the review, January 2009.

CIHEAM Watch Letter

- Watch Letter No 12, "Climate change and Mediterranean agriculture", Winter 2010.

Options Méditerranéennes

- *Les produits de terroir, les indications géographiques et le développement locale durable des pays méditerranéens*, Yavuz Tekelioğlu, Hélène Ilbert, Selma Tozanlı (eds.), Options Méditerranéennes, Series A, No 89, CIHEAM-MAIM, Montpellier, 2009.

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