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Family farming, food security and public health in the Americas

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[Access 2000 Earth Charter here](#)

[Access 2011 report of the UN Special Rapporteur on the right to food here](#)

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[Access August 2012 Best Food on Earth: Peru. Enrique Jacoby, Patricia Murillo here](#)

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Introduction

Important economic, technical, and political issues underlie current agricultural, social, and health issues and problems in the Americas. Modernisation of agriculture has meant an increased concentration of land in large farms that favour the production of a few commodities and single crops – such as wheat, soy, sugar, and corn – which lend themselves to large-scale, mechanised production of products that are easy to store and transport over long distances.

This has enabled the gross domestic product of the agro-exporting countries to grow, and has led to the emergence and consolidation of the processed food industry, with significant profits for the international and domestic economic groups in whose hands this activity is concentrated. But this has been accompanied by negative externalities, including the displacement of small and medium-sized farms, the loss of agricultural biodiversity, and the persistence or increase of various forms of malnutrition and diet-related chronic non-communicable diseases such as obesity and diabetes.

All of this requires a coherent and comprehensive response in order to link thought and action on family farming, food security, protection of natural resources, and care for human health and nutrition. In this context, the United Nations General Assembly unanimously declared 2014 The International Year of Family Farming. The UN recognises that family farms are crucial to meet challenges in food security, preventing diet-related chronic non-communicable diseases, and preserving natural resources, all of which is in line with achieving sustainable development goals (2)

Nutrition and health situation

The region of Latin America and the Caribbean has the capacity to feed all of its population and still be a net exporter of food. Despite this, 47 million people in the region remain underfed (2), and approximately 7.1 million children under the age of 5 suffer chronic under-nutrition (3). Iron-deficiency anemia is the most prevalent nutritional problem, estimated to affect 44.5 per cent of children and 22.5 per cent of women of reproductive age.

At the same time, excess weight and obesity have taken on epidemic proportions in the past quarter century, among all age groups and social strata. The current rate of these two conditions among children under the age of 5 is now 7 per cent; among school children it is between 25 and 30 per cent; and in the adult population at least 50 per cent are affected. In three countries (US, Chile, and Mexico) the adult rate exceeds 70 per cent. Excess weight is directly associated with the emergence of

chronic diseases such as diabetes, cardiovascular diseases, and several cancers, which are the main causes of illness and death in the US and Canada and now also in Latin America and the Caribbean.

Undernutrition and obesity are not direct opposites, despite the misconception that the former results from deprivation of food and the latter from gluttony. They share a common denominator, which is malnutrition. Both are characterised by monotonous diets of poor nutritional quality that lack essential vitamins, minerals, and bioactive substances important for human growth and health. Low-income families tend to consume sources of cheap calories, because the relative cost of nutritious foods, both in money and preparation time, is generally greater than that of ready-to-eat snacks and all kinds of fast food and soft drinks.

Another way these two forms of malnutrition are related, is that those who suffer under-nutrition and growth deficiencies in early life, primarily from gestation until the age of 2, are more likely to develop obesity and its complications as adults.

Nowadays, the diets of rural populations tend to be based on a few foods, such as roots, tubers and a few grains, while in Latin American cities hyper-caloric diets based on processed industrial products have begun to spread massively. The typical concentration of urban diets on a few foods is influenced by the economic emphasis placed on large-scale industrial agricultural production of just a few crops, such as soybeans, corn, and wheat (4). This has negative consequences not only for health, but also for the sustainability of agricultural food systems.

Factory farming, ultra-processed food products, and health

Industrialisation of agriculture has caused significant changes in eating habits. The agricultural revolution of around 10,000 years ago was possible because of the domestication of several grains. This increased available dietary energy, in turn making it possible for populations to increase and for several civilisations to develop.

However, from a nutritional standpoint, it was a setback in the quality of the human diet, which manifested in deficiencies of protein and several micronutrients.

Archaeological evidence has shown that this dietary loss translated into a loss of several centimetres of height. Diets depending on a few grains, compared with the gatherer-hunter diet which was much more diverse and rich in plant sources, have a lower ratio of nutrients to calories. Attention paid to nutritional deficiencies since the end of the 19th century, as well as the increased diversification of diet in some

regions of the world, once again allowed human potential for growth, development, and performance of physical labour to increase (5).

This re-emergence of diversity in eating patterns was short-lived from an evolutionary perspective. In the last half century, diets have been increasingly made up from industrialised ingredients such as sugar, refined flour, oils, and red meats, which are all used in the mass production of ready-to-eat packaged foods. We refer to these as ultra-processed food products, using the definition of the University of São Paulo's Center for Epidemiological Studies in Health and Nutrition (6).

Ultra-processed products are made ready to consume. Their ingredients are refined substances extracted from foods, oils, starches, sugar, salt, sugar and various chemical additives in carefully concocted combinations that give these products high palatability and a longer shelf-life than foods that are perishable. They are often cheap, are ubiquitous, and are heavily marketed. Their growing presence is eroding the habit of cooking and the socialisation that accompanies meals, and causing culinary traditions to be abandoned. In this process, the decision-making power of people and families regarding what to eat and how, is progressively ceded to the ultra-processed food industry (7-9).

One of the main ingredients in ultra-processed products is sugar. In less than a century sugar has attained levels of consumption that seriously threaten human health. It is known that sugar is liable to be toxic when consumed at current levels that amount to more than 200 and up to even 500 calories per person per day. These levels of consumption can wreak havoc on the human homeostatic system which keeps the balance between the intake and expenditure of dietary energy, disrupting the hunger and satiety mechanism and causing addiction (10,11), and produce obesity, hypertension and diabetes (12-14).

Cultural heritage, food quality, and culinary skills, also determine eating patterns and food security. Like human health, these are also in danger. Many culinary cultures formed over centuries of harmony and interaction with agriculture, are at risk of dying out or have already disappeared. In this process, rural farmers and urban consumers have grown far apart and now usually know little of one another. Growers have been relegated to the most basic farming activities, while all other aspects of the agrarian economy have been virtually monopolised by powerful intermediaries who impose their own conditions.

There is now a need to increase the production of whole natural foods and also to recover such parts of the agrarian economy as the basic processing, packaging, storage, transport, and sale of foods. The main feature of sustainable food systems is respect for the basic principle of ecological integrity. This among other things, entails protecting and restoring the integrity of eco-systems, with special concern for biodiversity, environmental protection, and the adoption of production,

consumption, and reproduction patterns that safeguard the regenerative capacity of the land, and specified in the [2000 Earth Charter](#) (15). Eating healthy diets based on local, seasonal agro-ecological production of foods should be encouraged, along with the promotion of short marketing circuits as an opportunity to enhance added value, ensure closer ties between farmers, consumers, and the land, and promote fair trade. All of these economic activities can and should be democratised.

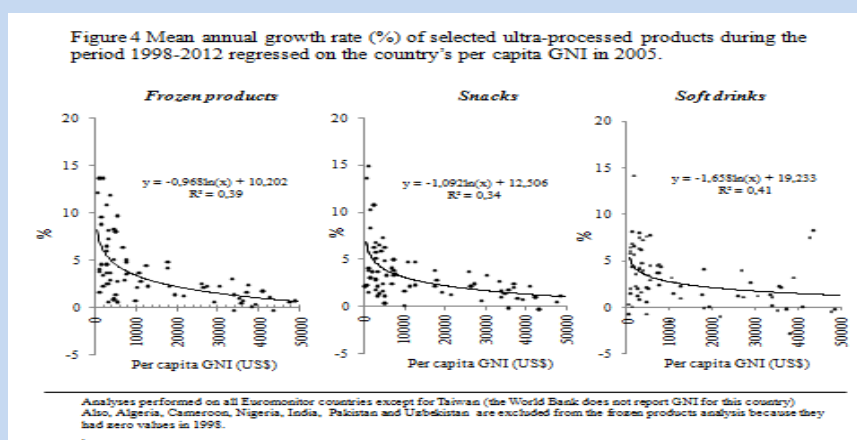
Economic agents and modern epidemics

In order to make effective progress in public policy and action, it is vital to identify and understand the driving forces behind changes in agriculture and the dietary and nutritional transition. Increased consumption of ultra-processed products is promoted through expansion of the ultra-processed products market. Globally this increasingly dominates food markets (16), particularly in the Americas (6, 8, 17).

Rates of sale of ultra-processed products are growing faster in emerging markets, where they surpass rates of sale in the developed economies. In emerging markets, sales of packaged foods are increasing at five times the rate found in developed countries, while sales of sweetened drinks are increasing at almost three times that rate. Sales of ultra-processed products in the developed economies such as the US and much of Europe, have already reached saturation points. (See Figure 1, below) (6) It is precisely this global scale of production and marketing of ultra-processed products that is accelerating the 'dietary-nutritional transition' and is now taking obesity rates to unprecedented levels in lower-income countries in a relatively short period of time.

Figure 1

Average increase in annual sales (per cent) of ultra-processed products (vertical axis), associated with gross national income per capita (\$US)



Taken from (6)

In the words of Margaret Chan, World Health Organization director-general (18):

Efforts to prevent non-communicable disease go against the business interests of powerful economic operators. In my view, this is one of the biggest challenges facing health promotion. ... It is not just Big Tobacco anymore. Public health must also contend with Big Food, Big Soda, and Big Alcohol. All of these industries fear regulation, and protect themselves by using the same tactics.

Children and adolescents are the most affected by these practices. They are bombarded with advertisements for ultra-processed food products. The lack of public information and protection from the harmful effects of these products collides with the fundamental human rights enshrined in various international agreements and conventions. These include the *International Covenant on Economic, Social and Cultural Rights*, the *Convention on the Rights of the Child*, the Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases (approved in the 66th General Assembly of the United Nations), and the 2011 Report of the Special Rapporteur on the Right to Food, to the UN Human Rights Council (19).

Such international instruments as these, establish the responsibility of UN member states – national governments – to protect the human right to health and food and to ensure the special care and protection of children. In response, countries in the Americas such as Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Peru, and Uruguay, have passed laws and regulations aimed at curbing the rapid increase in the number of overweight or obese children.

Also, during the last decade several states in the US have successfully modernised the food environment in schools. One step has been to eliminate ultra-processed snacks and soft drinks (sodas) from vending machines and from daily menus. Legislation in the countries of Latin America and the Caribbean has similar objectives. This includes the introduction of easy to interpret front-of-pack warning labels for processed products, the restriction of advertising aimed at children, and in the case of Mexico, the introduction of a tax on sweetened soft drinks and high-calorie snacks.

Such legislative and regulatory initiatives have been possible thanks to the combined efforts of government ministers up to and including the level of head of state, government officials, other politicians, attorneys, consumer advocates, public interest groups and social movements, who have come to recognise the devastating consequences of ultra-processed food products. Also, public opinion has certainly favoured these initiatives. But despite the abundant scientific evidence and international recommendations, the processed food product corporations continue to challenge regulatory measures, and in some cases have even successfully halted their implementation.

Family farming, social development, sustainable food production

The problems caused by more than a century of factory farming are aggravated by significant simultaneous and inter-related global phenomena. These include persistent global financial crises; volatility of food prices; widespread social unrest; and growing certainty that the impacts of climate change (such as water shortages, soil degradation, loss of biodiversity, desertification, and depletion of ecosystems) are coming sooner than previously expected.

These events have created a renewed impetus and political interest in family farming, with its potential to mitigate such phenomena. Latin American countries such as Argentina, Brazil, Nicaragua, Bolivia, Ecuador, Guatemala, and El Salvador have gone beyond rhetoric and have implemented important policies that place family farming high up on the policy-making agenda (1)

Box 1

Successful family farming initiatives in Latin America

Brazil. Family Farming Food Procurement Programme

In Brazil the Family Farming Food Procurement Programme (PAA) is part of the Zero Hunger (*Fome Zero*) programme. It links local production with food consumption. One objective is to provide minimal reserves of food basket items through direct advance purchase of crops from family farms in the regions where they are consumed, and to distribute this food to populations and communities at risk of under-nutrition. By June 2009 the programme had invested around \$US 20.5 million to make purchases from 97,000 farmers.

Brazil. School Meal Programme

Also in Brazil the School Meal Programme (PNAE) has generated a lot of family farming activity. The law stipulates that at least 30 per cent of the food supplied through the programme must come from small farmers, in order to strengthen family farming and local economies, to increase the consumption and quality of local products, and to respect regional food cultures and dietary patterns.

Central America. Promotion of vegetables and fruits

One success story is the programme in Central America for the production of safe fruits and vegetables by small growers, including indigenous women farmers and their families. In El Salvador, promotion of the use of WHO handbooks for the growing of safe fruits and vegetables in family farms has led to a reduction in incidence of diarrhoeal diseases. This initiative promotes health through family farming, since these farms produce healthy and safe food, improve dietary diversity, protect the environment by not using pesticides, favour the rational use of water, and promote shifts in consumption toward locally produced fresh produce. These practices also all reduce carbon footprint

The greatest potential for family farming lies in providing healthy and nutritious food for entire populations, including the most vulnerable social groups. Family farming is a strategic sector within the Latin American region. It does more than contribute to food production, stimulate local economies, and play a role in the social dynamic. It also provides populations and communities with healthy foods such as fruits and vegetables, legumes, whole grains, fish, meat, milk and dairy products. The importance of family farming is apparent in the production of beans (67 per cent), cassava (84 per cent), corn (49 per cent), and milk (52 per cent) in Brazil; of corn and beans in Colombia (30 per cent); and of potatoes (64 per cent), onions (85 per cent), corn (70 per cent), and lamb (83 per cent) in Ecuador. All of these foods are rich in nutrients (20).

Family farming systems may represent up to 80 per cent of the economic production units and more than 60 per cent of total natural food production in some countries in Latin America and the Caribbean. They also employ more than 70 per cent of the total agricultural work force, which in some countries is dominated by women. In the Andean countries of Peru, Bolivia, and Ecuador, women are the backbone of traditional farming systems. An example of family farming's contribution to feeding the population is shown in Figure 2.

Figure 2

Contribution of family farm output to food consumption in Brazil

Top row, percentages of cassava, beans, corn, coffee, rice, wheat, soybeans

Bottom row, percentages of milk, poultry, pork, beef



Taken from: Ministry of Agricultural Development, Brazil. 2006 Agriculture Census

Thus family farming plays an important role in supplying local and national markets, boosting local economies, and favouring development of small producers. It is now essential to ensure that this form of agricultural production is viable and sustainable. This will require public policies and actions to support initiatives such as government food purchases, conditional transfer programmes, and school meal programmes. These will improve health and nutrition along with the economic and social development of farming families and rural economies generally.

Furthermore, family farming is an important way to preserve the environment. It tends to use mixed systems of production that can better withstand adverse climate conditions, are more labour-intensive, and reduce risks through diversified production. This type of production is also less vulnerable to economic and environmental shocks (21). Family farming also makes a significant contribution to the preservation and revival of traditional products. These have an important cultural value for many native populations of the Americas, and also help strengthen food diversity for the whole population, particularly in countries where ultra-processed products are gaining ground.

The quality of food is important from both a nutritional and agricultural standpoint, and also in gastronomic terms. Historically, use of the word 'quality' as applied to food has been associated with its flavour and with traditional methods of production, linking the land and the culinary value of the crop. This idea lives on now with 'designation of origin' quality marks commonly used in the marketing of specific foods and drinks.

The concept of quality should include both nutritional and gastronomic value, as well as traditional and cultural value of the crops. 'Quality' also designates characteristics that lend added value, such as organic and other types of production that respect the environment; production zone, such as from mountainous areas; and the traditions these involve. This concept of 'quality' is almost always associated with small or medium-scale production, for the main purpose of this form of production is food for human consumption, rather than commodities produced for their commercial and economic value.

Interest in family farming now extends beyond the agricultural sector. It is included in a report by the UN Special Rapporteur on the Right to Food (19). This states that the UN should address the problems of poverty, malnutrition, and environmental sustainability, all together. More than 360 organisations, coordinated by the World Rural Forum, encouraged the United Nations to declare 2014 the International Year of Family Farming. This commitment has helped the UN and its relevant agencies to realise that family farmers are crucial in ensuring better food security and preservation of our natural resources. They do this in ways a way that are consistent with the 2000-2015 Millennium Development Goals, with the post 2015 development agenda, and with the Zero Hunger Challenge (2).

Sustainable food systems and healthy diets In post-2015 development plans and actions

Sustainable food systems and healthy diets have the potential to meet the nutritional requirements of the populations that consume them, without compromising the needs of future generations. This is only possible through efficient and responsible use of natural resources, support for and fair treatment of farm workers, the reuse of waste, support for the production of nutritious foods, and their supply and availability primarily through local markets.

Family farming promotes healthy and sustainable food systems and dietary patterns. It can yield natural foods while using fewer inputs, can improve the supply of local and seasonal agro-ecological foods, and operate in short marketing circuits, which reduces transaction costs and increases farmers' profits.

These concepts were backed by the 2013 Madrid high-level consultation on *Hunger, Food Security and Nutrition* (22). This concluded that attaining food security and optimising nutrition are critical to the global post-2015 development agenda. It also noted the strong link between the nutritional status of a population and its potential for economic and social growth, such that 'nutrition interventions generate returns among the highest of 17 potential development investments' (23). Governments should therefore strengthen intersectoral policies, with special attention to:

- Favouring food systems with policies that encourage the production of healthy foods to make them more accessible to the population, such as with subsidies for the production of healthy foods (24).
- Supporting family farming in the sustainable production of healthy foods that are safe for human consumption.
- Promoting and protecting sustainable systems of production and traditional diets, while ensuring food and environmental safety and protecting natural resources and biodiversity.
- Using statutory regulation including taxation to protect consumers from fraudulent business practices, misinformation on health benefits, and the production and marketing of ultra-processed food products with little or no nutritional value (25).

These recommendations are consistent with the content of, and the specific government obligations emanating from, the human right to adequate food (26).

Considering the close links between food and nutrition security, sustainable agriculture, nutrition, and health, the following recommendations are made in Box 2 for the establishment of an UN inter-agency initiative, with its mission and work.

Box 2

A UN inter-agency initiative for farming, food, health and the environment

1 Improve the food environment, check and reduce obesity and related diseases

Examples of how to promote access to high quality, sustainable food and diets:

- Assurance that access to healthy diet is a constitutionally protected right
- Restriction and regulation by government of production, labelling, and marketing of harmful processed foods, including of their price and availability.
- Regulation of food and drink advertising, particularly to children.
- Use of government purchasing power to procure natural foods from family farms.
- Supply of these foods to national, state, municipal and local food programmes for schools, military installations, hospitals, public agencies, community kitchens.
- Creation of new local food markets, along with related small-scale industries such as processing and freezing plants and restaurants that add value.
- Action to favour healthy food systems with policies to support production, such as subsidies on fruits, vegetables, making them more accessible to the entire population.
- Promotion of national and regional culinary traditions, highlighting their cultural value and their benefits for agriculture, the environment, and health.
- Expansion of food safety programmes, to include protection against non-communicable diseases associated with use of for example sugar, salt, *trans* fats, additives, contact materials that affect the endocrine system.

2 Support for family farming, agricultural development, sustainable food systems

Examples of agriculture and development policies and actions that support health:

- Development of sustainable family farming, including aquaculture and integrated food production systems, with subsidies and other support.
- Creation of networks of metropolitan retail food markets to offer new opportunities to local farmers and consumers, bringing consumers closer to farmers.
- Progressive elimination of antibiotics used to promote animal growth and the prudent use of antibiotics in agriculture.
- Assessment of health implications of agricultural policies to market foods that encourage family farming, healthy and sustainable foods and diets, and short circuit marketing.
- Ensured use of food safety standards, such as for additives, hormones, pesticides, residues of veterinary drugs, labelling, health claims.
- Elimination of food waste during production, distribution, marketing and consumption.

3 End undernutrition, promote optimal feeding for children under 5 and women

Examples of approaches based on health and nutrition outcomes:

- Eradication of all forms of undernourishment and malnutrition in Latin America and the Caribbean.
- Increase of rate of children under 6 months old who receive breastfeeding exclusively.
- Application of the recommendations of the WHO Code on the Marketing of Breast-milk Substitutes.
- Reduction of anemia among children under age 5 and women of childbearing age.
- Reduction of chronic undernutrition among children under age 5.

The integration of these recommendations through effective and transparent partnerships is essential, in order to move toward sustainable agricultural systems that promote health and guarantee food and nutritional security.

This requires commitment from all actors within countries and the consistent support of relevant United Nations agencies. These include the Economic Commission for Latin America and the Caribbean, the Food and Agriculture Organization of the UN, the Pan American Health Organization-World Health Organization, the World Food Programme, the United Nations Children's Fund, the United Nations Environmental Programme, as well as the World Bank, and regional organizations such as the Inter-American Institute for Co-operation on Agriculture.

Towards more consistent policies and better governance

In the Latin America and Caribbean region, under-nutrition and micronutrient deficiencies have been reduced. But progress has been uneven. Also, rates of obesity and diet-related chronic non-communicable diseases such as diabetes and heart diseases continue to rise rapidly.

It is necessary to promote consistency between agrarian policies, food systems, and policies to promote healthy diets and eating habits. That is the purpose of this publication. We look for a greater convergence of our institutional plans and policies, together with strong and active celebration of the good practices that exist in the region. We look forward to their translation into national and regional public policies and actions.

There are concrete examples of progress in the Americas, several of which are mentioned above. El Salvador, Brazil, and Ecuador have instituted various policies to support family farming. About ten countries have passed laws and legislation to promote healthy diets for schoolchildren and protect them from the negative impacts of the marketing of ultra-processed products.

There is resurgence of and renewed appreciation for various foods native to the region, which is now part of a growing interest in national and regional cuisine which is celebrated by natives and foreigners alike. The UN System including the World Health Organization is emphasising the need to prevent and control obesity and chronic non-communicable diseases. All these developments relate to health and sustainable social and economic development.

A new paradigm is emerging. The need to make better use of food systems and supplies to improve nutrition and health is now well understood. More than that though, perception has now shifted toward promoting healthy, sustainable, biodiverse and culturally appropriate diets, always with respect for the environment.

This vision and mission is not antagonistic to international commercial agriculture. It seeks to create much more space for production and consumption of natural foods and the social and economic prosperity that comes with them.

Agriculture and food policies that include the sustainable consumption of foods and reduction of their waste, need to be incorporated into the post-2015 development agenda for Latin America and the Caribbean.

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Status

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