

REFLECTION

Current perspectives on food: from nutritionism to healthy, supportive, and sustainable food

Perspectivas actuales sobre alimentación: del nutricionismo a la alimentación saludable, solidaria y sustentable

Gustavo Cediel^{1,2}  Eliana María Pérez Tamayo¹  Laura González Zapata²  Diego Gaitán Charry¹ 

¹ Universidad de Antioquia - School of Nutrition and Dietetics - Unit of Problems of Interest in Public Nutrition - Research Seminar on Food, Planet, Society, and Health - Medellín - Colombia.

² Universidad de Antioquia - School of Nutrition and Dietetics - Social and Economic Determinants of Health and Nutrition Research Group - Medellín - Colombia.



Open access

Received: 10/03/2021

Accepted: 14/07/2021

Corresponding author: Gustavo Cediel. Semillero de Investigación sobre Alimentación, Planeta, Sociedad y Salud, Unidad de Problemáticas de Interés en Nutrición Pública, Escuela de Nutrición y Dietética, Universidad de Antioquia. Medellín. Colombia. Correo electrónico: gustavo.cedielg@udea.edu.co.

Keywords: Diet; Diet, Healthy; Food Security (MeSH).

Palabras clave: Alimentación; Dieta saludable; Seguridad alimentaria (DeCS).

How to cite: Cediel G, Pérez-Tamayo EM, González-Zapata L, Gaitán-Charry D. Current perspectives on food: from nutritionism to healthy, supportive, and sustainable food Rev. Fac. Med. 2022;70(3):e94252. English. doi: <https://doi.org/10.15446/revfacmed.v70n3.94252>.

Cómo citar: Cediel G, Pérez-Tamayo EM, González-Zapata L, Gaitán-Charry D. [Perspectivas actuales sobre alimentación: del nutricionismo a la alimentación saludable, solidaria y sustentable]. Rev. Fac. Med. 2022;70(3):e94252. English. doi: <https://doi.org/10.15446/revfacmed.v70n3.94252>.

Copyright: ©2021 Universidad Nacional de Colombia. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, the original author and source are credited.



Abstract

Of the many discourses on nutrition and food, two opposing perspectives stand out. On the one hand, "nutritionism" emerged strongly in the last decades, reducing the concept of food to the presence or absence of nutrients and the concept of health to the absence of diseases, a discourse that has influenced modern nutritional and food sciences, as well as the conceptualization of the current corporate food regime. On the other hand, "healthy, supportive, and sustainable food" is a re-emerging perspective associated with the traditional ancestral food system and is founded on the principle of common good since millennia ago. This paper presents a reflection on these two perspectives, taking into account the historical scenario and the socio-political context that characterize them, in order to contribute to the recognition of a food paradigm consistent with the Millennium Development Goals and the human right to food. In addition, this reflection aims to assess the progress that has been made in Colombia to achieve healthy, supportive, and sustainable eating practices in the general population.

Resumen

Entre los múltiples discursos sobre nutrición y alimentación, hay dos perspectivas opuestas que se destacan: por una parte, el "nutricionismo", que emergió con gran protagonismo en las últimas décadas y reduce el concepto de alimentación a la presencia o no de nutrientes, y el de salud, a la ausencia de enfermedades, discurso que ha influenciado las ciencias nutricionales y alimentarias modernas y la conceptualización del actual régimen alimentario corporativo, y por otra parte, la "alimentación saludable, solidaria y sustentable", una perspectiva reemergente asociada al sistema alimentario tradicional ancestral constituido a partir de la ética del bien común desde hace miles de años.

El presente artículo presenta una reflexión sobre estas dos perspectivas, teniendo en cuenta el panorama histórico y el entorno sociopolítico que las caracterizan, con el propósito de contribuir al reconocimiento de un paradigma alimentario que esté en línea con los objetivos de desarrollo del milenio y con el derecho humano a la alimentación. Además, esta reflexión pretende valorar los avances que se han realizado en Colombia para lograr una alimentación saludable, solidaria y sustentable en la población general.

Introduction

At present, there is widespread confusion as to what the best food practices are, which is largely due to the amount of information available on the Internet offering the population an infinite number of discourses created not only by marketing interests,¹⁻³ but also by certain sectors of the academia, civil society and social movements that attempt to develop better public policies to protect the human right to food.^{4,5}

This conflicting interests scenario can be explained by reviewing the history of nutrition as a modern science, which dates back approximately 100 years, since it is attributed with both favorable and unfavorable aspects in the food and nutrition field. At the beginning of the 20th century, researchers in the area of biochemistry and medicine, with the primary objective of contributing to public health, were able to isolate specific food components (later called vitamins) related to the prevention of major population problems of the time, such as protein-energy malnutrition, beriberi, osteoporosis, pellagra, and scurvy.

Achieving these isolates allowed the generation of strategies such as the massive and mandatory fortification of the main food drivers containing vitamins. However, simultaneously and moving away from the primary interest of public health, the pharmaceutical and food industries have taken advantage of this opportunity to disseminate the technological modification of foods to create industrialized edible formulas for their economic benefit.⁶ As a result, the food industry began to become more high-tech, resorting in many cases to corporate policies that promote the industrialization, trade and marketing of ultra-processed food products (UFP) and multivitamin or nutrient-specific supplements that involved little or no natural food at all. The problem with this lies in the fact that, although this process is based on the claim of improving the food and nutritional security of the population, it has economic foundations.^{7,8}

Of the many discourses on nutrition and food, two opposing perspectives stand out: “nutritionism” and “healthy, supportive, and sustainable food” (HSSF). Some researchers in the field of philosophy have associated the phenomenon of technological development in the food industry with the perspective of “nutritionism,” in which food is reduced to the presence of nutrients and health to the absence of disease.⁹ This perspective has been the basis for much of the theory of modern nutritional and food sciences, including the development of food guidelines, public policies and social programs, or the conceptualization of nutrient recommendations or adequacy.¹⁰

Therefore, from the perspective of nutritionism, what is known as adequate or healthy nutrition has not only been insufficient to solve current food and nutrition problems, but also to address the multiple forms of malnutrition, especially in vulnerable and disadvantaged communities.^{11,12} On the contrary, this concept has been used by large corporations that have interfered in public health initiatives by camouflaging their commercial interests and creating strategies that have led to address all aspects of the food and nutrition issue based on unhealthy products.^{4,13-15}

In contrast to nutritionism, some scientists have been conducting research that encompasses theoretical, scientific and political aspects of food, an activity that probably arises as a result of the socio-environmental crisis that is taking place around the world and the ongoing struggle of communities to achieve their own benefit. Such a struggle is rooted in the popular wisdom that emerges predominantly from the rural sector and indigenous communities in defense of the process of biocultural evolution associated with natural food, as well as in the recognition of the perspective of the HSSF and the human right to food. This is a conception that goes beyond isolated food, its nutrients and their adequacy,

and is oriented to more holistic approaches, such as food patterns, that are influenced by practices that must be reconsidered based on different ideas related to food as a social fact.

Thus, the HSSF approach aims to improve the epidemiological, food and nutritional situation of populations from a broad perspective. To this end, the knowledge of various social actors is combined, so that an epistemological and multi-paradigmatic stance is adopted to redesign the food system to make it truly healthy, supportive and sustainable, while acknowledging the historical relationship of human beings with food, one that is in harmony with nature and not based on unhealthy, unfair, and unsustainable industrial formulations associated with corporate food regimes.¹⁶⁻²⁰

In this sense, this article presents a reflection on these two perspectives (nutritionism and the HSSF), taking into account the historical panorama and the socio-political environment that characterize them, with the purpose of contributing to the recognition of a food paradigm that is in line with the Millennium Development Goals (MDGs)²¹ and the human right to food. In addition, this reflection aims to assess the progress that has been made in Colombia to ensure HSSF for the general population.²²

Food from the nutritionism perspective

The nutritionism perspective was originally outlined in Australia by philosopher Gyorgy Scrinis as the dominant paradigm of modern nutritional science and dietary recommendations. It is characterized by a nutritionally reductionist approach to food that is limited to the interpretation of the role of nutrients in body health, resulting in a decontextualization, simplification, fragmentation, exaggeration, and determination of the role of nutrients.⁹

In 2007, the term nutritionism was reappropriated and popularized by Pollan,²³ who argued that because science has an incomplete understanding of how food affects the human body, relying solely on information about nutrients has led people and policymakers to make multiple wrong decisions about nutrition issues.²⁴ As a result, some entities that control much of the world food trade and are related to the World Health Organization (WHO), such as the *Codex Alimentarius*, conceive food as processed, semi-processed or raw substances intended for human consumption. They include beverages, chewing gum and any substance used in the manufacture, preparation or treatment of food, and exclude cosmetics, tobacco, or substances used only as medicines.²⁵

According to the above definition, foods derived from plants or animals (fresh and natural) are comparable to industrial formulations (UFP); therefore, in legal and public policy scenarios related to food, it is possible to equate a piece of chewing gum and a piece of fruit in terms of the provision of basic elements to maintain biological systems. This promotes an ambiguous conceptualization of a term as basic as “food”, which generates confusion in reference institutions and among food and nutrition decision-makers.

Such a picture suggests that citizens are immersed in a corporate food regime that does not emerge randomly and that operates on the basis of economicism and under the ethics and logic of the market. Moreover, this regime is characterized by the fragmentation and industrialization of food through global corporate models that break the link between people, food, nature and health, and that also ignores the social function of food culture and partially alienates the individual from his or her biocultural universe by treating food as a commodity and not as a common good, creating social instability and showing little concern for the environment.⁵

In addition, there is a global homogenization of food that is partly explained by the reduction of the concept of food to a system of nutrient transfer through industrialized

food products, as well as the invisibility of the relevance of biocultural and culinary evolutionary development achieved by mankind for thousands of years using natural and fresh foods under the ethical principle of the common good. Thus, the current challenge is to rescue the holistic vision that ancestral peoples had of food, specifically the concepts of planetary and social boundaries (which have been rapidly developed in the last decade by various organizations and can be summarized in the MDGs)²¹ and to reinforce the importance of conceiving food as a global issue, since this is the only way to be able to speak of HSSF.

Food from an HSSF perspective

The modern population's lack of knowledge about the natural origin of food and the cultural richness of the culinary universe highlights the importance of promoting greater integration between food sciences within nutritionism, which tend to take a materialistic approach, and human and social sciences. In this regard, Fischler²⁶ established that food can be considered as a social, cultural and political fact that is intersected by direct and indirect determinants related to health, nutrition, culture (education and religious beliefs), economy, among others.

Accordingly, in the HSSF perspective, food is conceived beyond the purely biological processes associated with nutritionism (nutrients and disease), so a healthy, supportive and sustainable food approach is envisioned. On the one hand, this favors the adoption of food patterns based on natural or minimally processed food preparations acquired through solidary socio-environmental models that are in tune with the protection of nature and with the culinary universe that emerges in each context. On the other hand, this avoids food patterns associated with the corporate food regime, which is characterized by large-scale production and marketing of UFPs associated with the presence of different forms of malnutrition and chronic diseases (CD) such as obesity, diabetes, hypertension, cancer, and cardiovascular diseases (diseases closely related to the global burden of disease), as well as with forms of marketing that are usually unfair and environmentally unsustainable.^{18,27}

From the HSSF perspective, foods obtained from nature and with which mankind has evolved biologically, socially and culturally for thousands of years are recognized as foods which, through culinary methods, have been transformed into preparations that provide health, social stability, harmony with the environment, and cultural identity. Likewise, based on this vision, multiple methods have been designed throughout history for the preservation and processing of these foods to avoid shortages in times when climate or seasonal issues do not allow their procurement.²⁴

Therefore, in HSSF, the problem is not food processing, but ultra-processing because, with the latter method, food is subjected to highly invasive industrial processes that result in an edible product with little or none of the original food content. Moreover, ultra-processed foods usually have a high content of fat, salt, sugar and cosmetic chemical additives, preservatives, and texture modifiers that are associated with unhealthy, unfair, and unsustainable diets that push out the traditional culinary culture and fails to take care of the environment.²⁸

In this sense, the HSSF perspective advocates the collective defense of the human right to food from a multidisciplinary approach, recognizing the essential nature of food for human beings since the beginning of time and acknowledging the juxtaposition of traditional knowledge about food. Consequently, it is essential to recognize food as a vital biological function as well as an essential social function, since it has a structuring role in human social organization and impacts the natural environment that surrounds them.⁵

Additionally, according to the HSSF perspective, the term *healthy* not only refers to the absence of disease; in fact, this is a broader concept related to physical, mental and social well-being that allows individuals, families and communities to enjoy a dignified life.²⁹ Hence, the concept of healthy is associated with anything that gives people health, which, in this case, is food and its nutritional components, as well as the ways of eating that allow them to enjoy their lives in the best possible way. Thus, HSSF attempts to grasp dietary patterns and the culinary universe, not as a repetitive consumption of nutrients or individual foods to avoid getting sick, but as individual and collective actions conditioned by social, political, economic, environmental, commercial, and cultural determinants that act as modulators of food and consumption among human collectives.

Other components that should be consolidated under the perspective of HSSF are *solidarity* and *sustainability*. Academic and political proposals at this point aim to address the socio-environmental dimension of food since there is an inevitable link between production forms, distribution, access and consumption of food, and social stability, environmental protection and human health.

Specifically, HSSF analyzes the dynamics of the traditional and ancestral food system with which we have co-evolved in a healthy, supportive and sustainable manner. It also characterizes how this traditional ancestral food system comes into conflict with global corporate food systems as they contribute to the depletion of natural resources, such as land and water, and to social deterioration due to the increase in food and nutritional inequalities and inequities, not only among consumers, but also among producers.^{18,30}

At the same time, the solidarity component of HSSF proposes to recognize the importance of the human right to food and good living, which strengthens the food culture of populations and territories influenced by food exchange habits based on knowledge, attitudes of solidarity and historically differentiated food practices. It also aims to take into account the problems arising from practices that violate the human right to food and are related to the production and marketing of food at local, national and international levels,^{1-3,26} for which the role of phenomena such as globalization, industrialization and homogenization of food patterns linked to the increase in the indiscriminate consumption of UFPs and the establishment of unhealthy, unsupportive and unsustainable corporate diets that increase the occurrence of CD should be understood.²⁸

With respect to sustainability, new theoretical currents are being promoted, such as MDGs,²¹ planetary boundaries, and planetary diets.³¹ From these, work is being done to build a safe space for humanity in which the priorities of the planet and its inhabitants are to reduce poverty rates, eradicate human deprivation, and ensure the well-being of human beings and the environment. Efforts to achieve these goals come from different sectors. For example, after the MDGs were established²¹ at the Rio+20 Earth Summit in 2012, a theoretical framework that combines planetary and social boundaries was discussed with the intention of creating a safe and fair space in which humanity can develop³² and, recently, a group of experts made a proposal that refers to planetary health diet and aims to establish healthy diets based on sustainable food systems.³³

Accordingly, it is necessary to recognize the characteristics of nutritionism and, consequently, of modern food practices that have led us to adopt a food configuration that is generally unhealthy, unsupportive, and unsustainable. For this reason, there is a need to return to traditional or ancestral forms of interaction with food and/or to adapt to new forms of interaction as proposed by HSSF. Table 1 summarizes the differences between these perspectives on food based on health, solidarity, and food sustainability.

Table 1. Differences between perspectives on food according to health, solidarity, and sustainability characteristics.

Features	Nutritionism	Healthy, solidary, and sustainable food
Health	Food is reduced to the presence of nutrients, and health to the absence of disease. This perspective contributes to the solution of specific nutrient problems, although it is insufficient to solve the current problems of obesity, chronic diseases, and double burden of malnutrition.	Comprehensive approach to food related to the adoption of dietary patterns that are associated with a lower prevalence of chronic diseases, incorporating a diverse natural diet based on plants (vegetables, fruits, legumes, seeds, nuts, and whole grains) that respects the culinary universe of each context and avoids the consumption of ultra-processed food products.
Solidarity	The related dynamics are usually based on monopolistic or oligopolistic phenomena in the various levels of the food system, thus favoring a few economic groups with global power.	This perspective is related to fair trade models derived from traditional exchange dynamics that are based on the ethics of the common good and protect the human right to food.
Sustainability	It has to do with the production of ultra-processed food products by means of highly technical monoculture farming models, which generally do not promote environmental sustainability due to the long distances covered by these products and the use of packages (usually plastic), generating an unfavorable environmental impact.	It reevaluates ancestral forms of production in conjunction with nature and natural foods through short marketing circuits and forms of presentation associated with circular economies in harmony with the environment.

Source: Own elaboration.

Towards HSSF in Colombia

Since the 1990s, a corporate food regime has emerged in Colombia with the following characteristics:^{18,34}

1. Regulatory frameworks are established in accordance with the capitalist industrial agri-food system.
2. Seeds are privatized, and their conservation and free circulation is restricted.
3. The intensive use of chemical inputs and fertilizers, as well as the massive production, importation, and sale of food products is encouraged.
4. Land grabbing by national and foreign corporations is promoted in large regions of the country, such as the non-flood areas near the Meta River in the Eastern Plains (known in Spanish as *altillanuras*).
5. Agro-industrial processes and the extension of monocultures are favored.
6. The expansion and increase of food distribution chains in large supermarket formats is stimulated.
7. The proliferation of UFP sales (of national and international origin) and the opening of new branches of fast-food chains in different food environments is increased.
8. The increase in the obesity, CD, chronic malnutrition, and micronutrient deficiency levels is facilitated.
9. The establishment of a business bloc in the agricultural and food sector is allowed.

This corporate food regime acquired strength in the country at the beginning of the 21st century when, as noted by Machado,³⁵ the process of deinstitutionalization of the public sector regarding the rural sphere was reinforced and consolidated by Law 790 of 2002,³⁶ which also conferred extraordinary powers on the President of the Republic. This led to the enactment of Decree 1300 of 2003,³⁷ which ordered the dissolution of the Colombian Institute of Agrarian Reform, the National Institute for Land Readjustment, the Co-financing Fund for Rural Investment, and the National Institute for Fishing and Aquaculture and created the Colombian Institute of Rural Development. This change resulted in the precariousness of the rural sector due to the drastic reduction of the sown area, which had a strong impact on peasant economies. Consequently, food imports increased (especially of UFPs),³⁸ and food security, sovereignty and quality in the country were compromised,

which in turn increased the many forms of malnutrition, especially among the most vulnerable populations.^{14,15,39}

On the other hand, the civil society, a political sector, and a part of the academia that are committed to the defense of the human right to food have encouraged the acknowledgement of movements to defend food sovereignty in different local contexts, which allows working for the protection of the traditional, ancestral, healthy, solidarity-based and sustainable food system in the various scenarios of public policy discussion in the country,⁴⁰⁻⁴³ as well as counteracting the strategies implemented by the corporate food regime set up in Colombia.⁴

The armed conflict experienced in Colombia for decades at different political levels is also an equally important factor that has influenced food policies in the country, since peasants have been the most affected by the clashes over land. However, there is a glimmer of hope with the peace agreement signed in Havana because a comprehensive reform, as stated in the agrarian agreement, will undoubtedly have a positive impact on the country's food and nutritional security.³⁵

All these signals and efforts have opened spaces in which progress in public policies on food has been made, with a strong role of academia, civil society and governmental entities, as is the case of Law 2120 of 2021⁴⁴ and Ordinance No. 5: Twelve-year Plan for Food and Nutritional Security of Antioquia 2020-2031.⁴⁵ This political progress represents a commitment to work by different sectors in order to include the programs and goals proposed in Ordinance No. 5 in the various development plans for the municipalities of Antioquia and to achieve a food system that is conducive to achieving HSSF depending on the differing realities of the department.

In accordance with the above, in the near future, work should continue to i) facilitate spaces for debate in academic circles, civil society, the community in general and political scenarios regarding the convenience of changing the current corporate food regime associated with nutritionism to a healthy, supportive, and sustainable food system; ii) recognize the political strategies that favor the establishment of the corporate food regime in the country; iii) highlight, promote, and replicate successful experiences that promote HSSF from the popular bases of traditional ancestral culture; and iv) establish public policies aimed at implementing a food system that is truly designed to promote HSSF among citizens in different decision-making scenarios (municipalities, governor's offices, presidency, and congress).

Conclusions

The current food perspective of nutritionism associated with the corporate food regime requires a paradigm shift towards the HSSF perspective. In Colombia, the efforts made to change the corporatist food regime for a healthy, supportive and sustainable food system need to be strengthened by different academic, civil society, community, and political actors in order to defend the human right to food.

Conflicts of interest

None stated by the authors.

Financing

This work was carried out with resources provided by the Universidad de Antioquia.

Acknowledgments

To the members of the Unit on Issues of Interest in Public Nutrition and the Seminar on Food, Planet, Society, and Health of the School of Nutrition at the Universidad de Antioquia for enriching the discussion of the topic during the group meetings. Also, to the members of the Academic Network for the Human Right to Food in Colombia for reading and commenting on the manuscript.

References

1. Steele S, Ruskin G, Sarcevic L, McKee M, Stuckler D. Are industry-funded charities promoting “advocacy-led studies” or “evidence-based science”? a case study of the International Life Sciences Institute. *Global Health*. 2019;15(1):36. <https://doi.org/ghsqsf>.
2. Mialon M, Gaitan-Charry DA, Cediel G, Crosbie E, Baeza-Scagliusi F, Perez-Tamayo EM. ‘I had never seen so many lobbyists’: food industry political practices during the development of a new nutrition front-of-pack labelling system in Colombia. *Public Health Nutr*. 2020;24(9):2737-45. <https://doi.org/f43p>.
3. Mialon M, Gaitan-Charry DA, Cediel G, Crosbie E, Baeza-Scagliusi F, Pérez-Tamayo EM. “the architecture of the state was transformed in favour of the interests of companies”: Corporate political activity of the food industry in Colombia. *Global Health*. 2020;16(1):1-16. <https://doi.org/h9xn>.
4. Han BC. *En el enjambre*. Barcelona: Herder; 2018.
5. Poulain JP. *Sociologías de la Alimentación. Los comensales y el espacio social alimentario*. Barcelona: Editorial UOC Alimentaria; 2019.
6. Mozaffarian D, Rosenberg I, Uauy R. History of modern nutrition science—implications for current research, dietary guidelines, and food policy. *BMJ*. 2018;361:k2392. <https://doi.org/ghdwwf>.
7. Monteiro C. The big issue is ultra-processing. *World Nutr*. 2010 [cited 2018 Apr 13];1(6):237-69. Available from: <https://bit.ly/3WdpifA>.
8. Monteiro CA, Cannon G, Levy R, Moubarac JC, Jaime P, Paula Martins A, *et al*. The Food System. *World Nutr*. 2016 [cited 2022 Oct 27];7(1-3):28-38. Available from: <https://bit.ly/2Jv4gr4>.
9. Scrinis G. *Nutritionism : the science and politics of dietary advice*. Columbia: Columbia University Press; 2013.
10. Bourges H, Bengoa JM, O ’Donnell AM. *Historias de la Alimentación en América Latina*. Sociedad Latinoamericana de Nutrición.
11. Cediel G, Perez E, Gaitán D, Sarmiento OL, Gonzalez L. Association of all forms of malnutrition and socioeconomic status, educational level and ethnicity in Colombian children and non-pregnant women. *Public Health Nutr*. 2020;23(Suppl 1):S51-8. <https://doi.org/dx9p>.
12. Cediel-Giraldo G, Castaño-Moreno E, Gaitán-Charry D. Doble carga de malnutrición durante el crecimiento: ¿una realidad latente en Colombia? *Rev Salud Pública*. 2016;18(4):656. <https://doi.org/jjkn>.
13. Mialon M, Gomes FDS. Public health and the ultra-processed food and drink products industry: corporate political activity of major transnationals in Latin America and the Caribbean. *Public Health Nutr*. 2019;22(10):1898-908. <https://doi.org/h9xp>.
14. Parra DC, da Costa-louzada ML, Moubarac JC, Bertazzi-levy R, Khandpur N, Cediel G, *et al*. Association between ultra-processed food consumption and the nutrient profile of the Colombian diet in 2005. *Salud Publica Mex*. 2019;61(2):147-54. <https://doi.org/dx9m>.
15. Khandpur N, Cediel G, Obando DA, Jaime PC, Parra DC. Sociodemographic factors associated with the consumption of ultra-processed foods in Colombia. *Rev Saude Publica*. 2020;54:19. <https://doi.org/dx9k>.
16. McMichael P. Global Development and The Corporate Food Regime. *Res Rural Sociol Dev*. 2006;11:265-99. <https://doi.org/fjdjtr>.
17. McMichael P. A food regime genealogy. *J Peasant Stud*. 2009;36(1):139-69. <https://doi.org/bxtw9v>.
18. Ordóñez F. Colombia y el régimen alimentario corporativo. *Agencia prensa rural*; 2014 [cited 2020 Jul 3]. Available from: <https://bit.ly/3T2oeZb>.
19. Sproesser G, Ruby MB, Arbit N, Akotia CS, Alvarenga MDS, Bhangaokar R, *et al*. Understanding traditional and modern eating: the TEP10 framework. *BMC Public Health*. 2019;19(1):1606. <https://doi.org/gqz624>.
20. Monteiro CA, Cannon G, Levy RB, Moubarac JC, Louzada ML, Rauber F, *et al*. Ultra-processed foods: what they are and how to identify them. *Public Health Nutr*. 2019;22(5):936-41. <https://doi.org/fwjv>.
21. Organización Mundial de la Salud (OMS). *Objetivos de Desarrollo del Milenio (ODM)*. Ginebra: OMS; 2010 [cited 2020 Jun 28]. Available from: <https://bit.ly/2SqOAED>.
22. Díaz-García J, Álvarez LS, Álvarez MC, Cadavid M, Cediel G, Gómez B, *et al*. *Plan Decenal de Seguridad Alimentaria y Nutricional de Antioquia 2020-2031*. Medellín: Universidad de Antioquia; 2019.

23. Pollan M. Unhappy Meals. *The New York Times*. January 28, 2007 [cited 2020 Jun 28]. Available from: <https://nyti.ms/3NjMh4c>.
24. Pollan M. In *Defense of Food: An Eater's Manifesto*. New York: Penguin; 2008.
25. Food and Agriculture Organization of the United Nations (FAO). *Codex Alimentarius. Definiciones para los fines del Codex Alimentarius*. FAO; [cited 2020 Apr 9]. Available from: <https://bit.ly/3DFNU9q>.
26. Fischler C. *El (H) omnívoro*. Barcelona: Anagrama; 1995.
27. Food and Agriculture Organization of the United Nations (FAO). *Ultra-processed foods, diet quality, and health using the NOVA classification system*. Roma: FAO; 2019 [cited 2019 Nov 1]. Available from: <https://bit.ly/3sDTxi0>.
28. Monteiro CA, Cannon G, Moubarac JC, Levy RB, Louzada MLC, Jaime PC. The UN Decade of Nutrition, the NOVA food classification and the trouble with ultra-processing. *Public Health Nutr*. 2017;21(1):5-17. <https://doi.org/f9wrxn>.
29. Organización Mundial de la Salud (OMS). ¿Cómo define la OMS la salud? Ginebra: OMS; [cited 2020 Jun 28]. Available from: <https://bit.ly/3gTQr71>.
30. Food and Agriculture Organization of the United Nations (FAO). *Indigenous Food Systems, Agroecology and the Voluntary Guidelines on Tenure*. Rome: FAO; 2015 [cited 2019 Aug 7]. Available from: <https://bit.ly/3SI5MVf>.
31. Willett W, Rockström J, Loken B, Springmann M, Lang T, Vermeulen S, *et al*. Food in the Anthropocene: the EAT-Lancet Commission on healthy diets from sustainable food systems. *Lancet*. 2019;393(10170):447-92. Available from: <https://doi.org/gft25h>.
32. CEPAL - United Nations. *Rio+20 el futuro que queremos*. Santiago de Chile: CEPAL; 2012 [cited 2022 Dec 28]. Available from: <https://bit.ly/3GxPb2B>.
33. Organización Panamericana de la Salud (OPS). *Sistemas Alimentarios Sostenibles para una Alimentación Saludable*. OPS; 2018 [cited 2020 Jun 28]. Available from: <https://bit.ly/3DIlyZv>.
34. León-Rodríguez N, Isaza Castro JG, Meza Carvajalino CA. *Las transformaciones del sector rural en Colombia desde las reformas neoliberales: un análisis entre 1980 y 2004*. Bogotá D.C.: Universidad de la Salle; [cited 2020 Jul 4]. Available from: <https://bit.ly/3gScWcy>.
35. Machado A. *El problema de la tierra: conflicto y desarrollo en Colombia*. Bogotá D.C.: Penguin Random House; 2017.
36. Colombia. Congreso de la República. Ley 790 de 2002 (diciembre 27): Por la cual se expiden disposiciones para adelantar el programa de renovación de la administración pública y se otorgan unas facultades extraordinarias al Presidente de la República. Bogotá D.C.: Diario Oficial 45046; December 27, 2002 [cited 2021 July 14]. Available from: <https://bit.ly/2m4H3kh>.
37. Colombia. Presidencia de la República. Decreto 1300 de 2003 (mayo 21): Por el cual se crea el Instituto Colombiano de Desarrollo Rural, Incoder y se determina su estructura. Bogotá D.C.: Diario Oficial 45196; May 23, 2003 [cited 2021 July 14]. Available from: <https://bit.ly/3gYXMSx>.
38. Bejarano-Roncancio J, Gamboa-Delgado EM, Aya-Baquero DH, Parra DC. Los alimentos y bebidas ultra-procesados que ingresan a Colombia por el tratado de libre comercio: ¿influirán en el peso de los colombianos? *Rev Chil Nutr*. 2015;42(4):409-13. <https://doi.org/g4xj>.
39. Cediel G, Perez E, Gaitán D, Sarmiento OL, Gonzalez L. Association of all forms of malnutrition and socioeconomic status, educational level and ethnicity in Colombian children and non-pregnant women. *Public Health Nutr*. 2020;23(Suppl 1):s51-8. <https://doi.org/dx9p>.
40. FIAN Colombia - Por el Derecho a la alimentación. Bogotá D.C.: FIAN Colombia; [cited 2020 Jul 3]. Available from: <https://bit.ly/3Nnz8XV>.
41. Equipo - Educar Consumidores. Bogotá D.C.: Educar Consumidores; [cited 2020 Apr 15]. Available from: <https://bit.ly/3STnPbl>.
42. Red Papaz. Bogotá D.C.: Red Papaz; [cited 2020 Jul 3]. Available from: <https://bit.ly/3fprWyc>.
43. Fundación Educar de Ida y Vuelta. Pan Rebelde. YouTube. March 16, 2017 [cited 2020 Jul 3]. Available from: <https://bit.ly/3h05yMh>.
44. Colombia. Congreso de la República. Ley 2120 de 2021 (julio 30): "Por medio de la cual se adoptan medidas para fomentar entornos alimentarios saludables y prevenir enfermedades no transmisibles y se adoptan otras disposiciones. Bogotá D.C.; July 20, 2021.
45. Colombia. Asamblea Departamental de Antioquia. Ordenanza No.5 de 2020 (mayo 7): Por medio de la cual se adopta el Plan Decenal de Seguridad Alimentaria y Nutricional de Antioquia 2020-2031 y se dictan otras disposiciones. Medellín; May 7, 2020 [cited 2022 Dec 28]. Available from: <https://bit.ly/3QBU5jt>.