

Food regime and family farming. Elements for food sovereignty

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Abstract

Food systems are becoming increasingly industrialized and commodified, causing a gap between food production and consumers; a process that affects the food security of large sectors of the population. The essay's objective was to analyze the role of agrarian activities and market relations of family farming in the context of the neoliberal food regime to propose territorially based food systems that contribute to food sovereignty. A systemic analytical framework was developed at three levels: neoliberal food regime, food system, and market; the study was conducted in 2023 for the case of Mexico. According to the analysis, the agrarian activities of family farming remain in the neoliberal food regime and are relevant for the income and food production they generate, but it establishes asymmetric market relations with intermediaries that limit their economic and social viability. The relationship of family farming with its territorial environment presents opportunities to connect production with consumers, favored by the diversification of the rural economy and the strengthening of the rural-urban link. It was concluded that family farming can contribute to the formation of territorial food systems and the social construction of markets, which favor overcoming asymmetric relationships in the market and food sovereignty. In the previous direction, it is essential to incorporate the territorial food dynamics of family farming and markets in the definition of public policy.

Keywords:

food security, smarket, territory.



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The growing trend towards the industrialization of food systems causes the distance between food production and consumers; this process affects the food security of large population sectors and causes multiple social and environmental consequences. It is expected that agricultural production worldwide will increase by 17% over the next 10 years, mainly motivated by the increase in crop yields, however, the goal of Zero Hunger, of the Sustainable Development Goals (SDGs) of the United Nations (UN), will hardly be achieved in 2030 (OECD-FAO, 2022).

The dynamics of food systems are central to access to food. It is not only about food production, which is necessary, but also that people have access to food in a sufficient and nutritious way. The food system is conceptualized as 'a set of activities that concur in the formation and distribution of agri-food products and, consequently, the fulfillment of the function of human food in a given society' (Gutiérrez and Molina, 2013).

The food system is integrated by the sectors and relationships of the food chain, from the producer to the consumer, and involves a transversal, multisectoral, and multi-stakeholder approach. The relations between economic agents are complex, imply relations of coordination but also a struggle for the domination and control of the system, between social and economic agents for the appropriation of economic income. The analysis of these relationships is a central aspect of their dynamics, functioning, and purpose.

Due to its permanence and social importance in Mexico, family farming is a central component of the food system, as it produces and consumes food generated on the farm, in addition to providing important environmental goods and services for society as a whole.

The essay's objective was to analyze the role of agrarian activities and market relations of family farming in the context of the neoliberal food regime to propose territorially based food systems that contribute to food sovereignty. A systemic analytical framework was developed for the approach to family farming, at three levels (García, 2007): neoliberal food regime, food system, and markets.

Food regime and safety

The neoliberal food regime tends to the vertical integration of agri-food companies, to the technical-scientific organization of food production, transformation, and distribution. It is accompanied and underpinned by the deregulation of trade, productive specialization, and the industrialization of agriculture. With neoliberalism, a third corporate food regime was established, on the dominance of the market and transnational corporations, driven by policies that imposed free trade, such as the International Monetary Fund (IMF) and the World Trade Organization (WTO) (McMichael, 2015).

'Food regimes are global structures, governed by rules, that manage production and consumption on a global scale' (Holt-Giménez, 2009). The neoliberal food regime increasingly dominates food systems, consisting of multinational seed, grain, agrochemical, and fertilizer companies, as well as food processors and supermarket chains.

These companies have greater influence and dominance over local markets, subordinate and erode local food production capacities, and 'are gradually taking over the resources needed for food production: land, water, genes, labor, inputs, and investments' (Holt-Giménez and Raj-Patel, 2012). The food system has a direct relationship with technical-scientific research, which founded the green revolution and industrial agriculture.

The green revolution began in the sixties with improved high-yielding varieties, rice and wheat, irrigation, improved use of moisture, fertilizers and pesticides, achieving increased yields in Asia, Africa, and Latin America. During the period 1963-1983, production of the main food cereals (rice, wheat, and corn) increased significantly (FAO, 1996).

Since the mid-1990s, industrial agriculture has been supported by a new green revolution based on biotechnology, with genetically modified organisms (GMOs), to increase productivity. This model is already underway under a solid and expensive research and commercialization

program, carried out by private companies in developed countries, a process that expresses a fundamental change with respect to the first green revolution, where the public sector played a central role in research (FAO, 2004). Norman Borlaug argued that faced with the challenge of feeding a growing population of 10 billion people in the twenty-first century, biotechnology would play an important role (FAO, 2004).

Holt-Giménez and Altieri (2013) suggest that the approach of a new green revolution linked to neoliberalism would deepen poverty and hunger, by advancing the privatization of seeds, land, and markets, it destroys small farmers, agrobiodiversity, and diminishes the resilience of the global agroecosystem. The phase of the neoliberal food regime has in the State, multinational agribusinesses (MAB) and biotechnology the entities that lead the technological paradigm of agriculture to a new stage (Otero, 2013).

The hegemony of the global food system distanced production and consumption, but also generated movements of criticism and social responses to this relationship, which advocate new relationships (Triches and Schneider, 2015) for food and consumption. Food security in the neoliberal food regime is fundamentally linked to a perspective aimed at increasing production, competitiveness, and access to food through the market. Population growth is one of the engines on which it rests and justifies its orientation. The productivist approach undoubtedly plays a central role in meeting a growing demand for food, but it is no guarantee of food security.

Agriculture and food security in Mexico

The Mexican case is an expression of the modality of agricultural development, in neoliberalism, productivist, specialized, linked to the international market, but with food dependence. In Mexico, a select number of entrepreneurs, 8.7% of the country's rural economic units (REUs), produce 74.2% of the sector's sales (SAGARPA-FAO, 2012). Entrepreneurs appropriate a significant market share and have greater political and economic power with it.

The specialization of production and integration into international trade was deepened by the application of structural adjustment measures, which was expressed in the elimination of support and subsidies, the deregulation of foreign trade with the accession to the North American Free Trade Agreement (NAFTA) in 1994, the elimination of support prices and their alignment with international prices; the elimination of state trade; land trade was liberalized; State-owned enterprises were privatized, and agricultural institutions were reformed.

From the 1990s, agricultural exports specialized in vegetables and fruits demanded in the international market, while imports were towards staple grains. During the period 1993-2014, the agri-food balance was negative, a condition that changed in 2015. Exports between 2015 and 2022 grew by 86.4%, going from 26 880 billion dollars (bd) to 50 133 bd, and imports increased by 72%. In 2022 the balance was positive by 5 806 bd (Banco de México, 2023).

When disaggregating the data of the agri-food balance by agricultural exports and imports, it was observed that the agricultural balance was negative by 130 million dollars in 2022. Agricultural exports were 21 328 bd and imports 21 458 bd. In turn, exports in agro-industrial products were 28 735 bd, of which food, beverages, and tobacco represented 99% (Banco de México, 2023) of that amount, and they constitute the central factor for the positive agri-food balance.

Food imports have deepened in recent decades, especially staple grains such as corn, wheat, rice, and beans. By 2022, imports of corn were 5 795 billion dollars (bd), wheat 2 116 bd, rice 576 million dollars, and beans 111 million dollars, which, together with soybeans whose imports were 4 134 bd, represent 59.3% of imports of agricultural products (Banco de México, 2023).

The agri-food model and the boom in agri-food exports do not solve food insecurity. In Mexico, in 2020, the population in poverty was 55.7 million people, 43.9% of the total population, and 28.6 million people have deficiencies due to access to food, 22.5% of the population (CONEVAL, 2023). The population's income, under the previous condition, is insufficient to acquire the food basket.

Social inequality is one of the structural factors that most affect food security, households do not have enough income to buy food, a condition that perpetuates poverty and hunger. About 3 billion people globally cannot access a healthy diet (FAO, 2021).

In Mexico, the expenditure made by rural and urban households in the acquisition of food represents, for the first decile, 60% of income in food; for the second decile, 42.8% and the third decile, 37.2%, while for the tenth decile only 12.8% (ENIGH, 2022). Thus, the lowest income deciles make a significant expenditure to acquire food. Low and insufficient household incomes and rising food prices subject them to a crisis of social reproduction and poverty.

The expansion of agricultural production and a positive agri-food balance in the country did not guarantee food security. A productivist pathway, although important for a food supply, is insufficient. The food crisis of 2007-2008 emerged amid a sustained growth in agricultural production, amid an increase in the number of poor people unable to access food. The agri-food system in Mexico must be evaluated not only for ensuring agri-food production in terms of its efficiency and supply but in terms of its capacity to feed and nourish people.

Based on the above, the food security approach shows and shows more limitations in addressing food insecurity; some of its evidence are the deepening of hunger and poverty at the planetary level. Emphasizing a market perspective to access food is not enough, a pathway aimed at reducing social inequality and strengthening production oriented to national, regional, and local consumption is central. Family farming is a valuable social resource to advance in the previous direction, it represents an option for feeding large sectors of the population.

Family farming and food systems

Family farming maintains diverse relationships in agri-food systems. Its dynamics and social and economic condition cannot be understood only from its resources and social organization, it is not an autarkic entity (Shanin, 1979). Due to its social characteristics, magnitude, and social heterogeneity, family farming is relevant for food production and job creation.

According to SAGARPA and FAO (2012), in Mexico, there are between 5.3 and 5.4 million rural economic units (REUs), according to the criteria for stratification, the following was identified: 1.2 million REUs of the subsistence family stratum (S1) without a link to the market; 2.7 million REUs correspond to the subsistence family stratum linked to the market (S2); and the stratum in transition (S3) 442 thousand REUs. As a whole, family farming represents 81.3% of the existing REUs in the country. The area and income earned by the REUs are presented in Table 1.

Table 1. Income structure by stratum of the REUs of family farming in Mexico.

Strata	(%) of the REUs	Average area (ha)	Value of self-consumption (agricultural, livestock, fisheries, aquaculture, and forestry)	Income from sales (agricultural, livestock, fisheries, aquaculture, forestry, and processed)	Income from employment outside the REU	Other income
S1. Subsistence family, not linked to the market	22.4	3.5	30.1	0	16.5	53.3
S2. Subsistence family, linked to the market	50.6	8.8	14.8	45.9	9.0	30.3
S3. In transition	8.3	32.3	3.4	73.9	3.9	19

Information from SAGARPA-FAO. Diagnosis of the rural and fishing sector: identification of the problems of the agricultural and fishing sector of Mexico, 2012.

Family farming is not a homogeneous whole, its assets, productive logics, and social relations are factors of social differentiation. Economic income expresses the capacity for accumulation, considering its magnitude and diversity. In the stratification, it is observed that, with a higher income from agricultural sales, non-agricultural income and a significant percentage of income for each of the strata decrease.

Agrarian activities (agricultural, livestock, fishing, aquaculture, forestry, and processing) are relevant to the social reproduction of family farming. The social condition of strata S2 and S3 is that of a domestic and mercantile economy. However, the S1 finds itself with a marginal productive activity of survival, does not produce surpluses, and undertakes other activities that allow it to obtain monetary income for its subsistence.

The effects of neoliberalism on family farming have marked the analysis of its social and economic condition, especially the emphasis on de-agrarianization (Escalante *et al.*, 2011), which, although it is an undeniable trend in the Mexican countryside, is not unique or linear. The social reproduction strategies of family farming manifest in their permanence, generating various trends of change. One of the mechanisms for the permanence of agrarian activities is the transfer of economic resources from non-agricultural activities to agricultural activities, in the absence of public or private financing. Agricultural and non-agricultural activities combine and complement each other to obtain an income and thus maintain the social reproduction of households.

On the other hand, family farming establishes a relationship with economic agents that participate in the agri-food system, in production, trade and consumption, relationships of coordination, but also due to the struggle and eventual conflict for the appropriation of the income generated in the agri-food system. To varying degrees, they maintain relationships with the market to obtain goods and services. One of the relationships of family farming, which illustrates the relationships with the agents involved in the market sphere, is the destination of agricultural production shown in Table 2.

Table 2. Percentage of production units, according to destination.

Sales of agricultural production	Production units (%)
Intermediary	53.1
Direct to the consumer	25.1
Store, warehouse, or collection center	11.5
Under contract	3.8
Packing or processing industry	1.2
Supply center	0.9
Shopping center or supermarket	0.3
Other types of buyers	4.7

National Agricultural Survey, 2019.

Family farming in the sphere of trade faces constraints, dominated mainly by intermediaries, under asymmetrical and subordinate relationships. Intermediaries appropriate the income generated by farmers. A smaller proportion of farmers sell directly to the consumer. In various proportions, the sale is carried out under contract agriculture, warehouses, and supply centers, which can lead to the subordination of agriculture to the logic of capital. In the same way, family farming faces difficulties in accessing goods and services, which further limit its condition. Table 3 shows the main problems of the production units.

Table 3. Percentage of production units by type of problem presented during the development of agricultural activities, 2019.

Type of problem	(%)
High costs of inputs and services	73.8
Difficulties in commercialization	57.3
Difficulties in exporting	31.8
Lack of training and technical assistance	30.8
Loss of soil fertility	27.9
Insufficient infrastructure	20.8
Insecurity.	19.6

National Agricultural Survey, 2019.

The problems posed by production units limit the profitability of agricultural activities, considering the high costs of inputs and services. In addition to presenting difficulties for commercialization and access to services such as technical assistance and infrastructure, essential factors to increase production and productivity. The above elements or problems are an expression of the social inequality suffered by family farming, which must be overcome and addressed for its social and economic viability.

The scenario of high international prices in agricultural products, the effects resulting from the COVID-19 pandemic, and international conflicts that destabilize the supply chain of inputs for agricultural production, such as fertilizers, are factors to be considered to encourage national agricultural production for the food and nutrition of the country's population. Family farming contributes significantly to this mission and is an option to rethink the model of food production and consumption, with the construction of food sovereignty oriented not only to production but to the control of the food system, from production to consumption (Holt-Giménez and Raj Patel, 2012).

Toward a territorially based food system

Considering the tangible and intangible assets of family farming and the territorial dynamics in which they deploy their strategies of social reproduction, privileging the regional over the global, is the starting point for the construction of territorial food systems. The regional aspect acquires importance due to the multidimensionality and configuration of the territories, as well as due to the relationship with the world economy and the responses in the territory (Santos, 1996). In this framework, the approach of the new rurality enriches the analysis of rural transformations by emphasizing the diversification of the rural economy and pluriactivity, without ignoring the importance of agricultural productive activities (Pérez, 2012).

Family farming is related to the territory, which expresses various configurations and economic and market relations, where agrarian activity is one of the economic activities. Family farming has an opportunity to strengthen production with consumers, taking advantage of the diversification of the rural economy and the strengthening of rural-urban links for the social construction of local or regional markets, of alliances between producers and consumers, favored by geographical proximity.

The social construction of markets falls under two considerations. On the one hand, food is considered a universal human right (Jusidman-Rapoport, 2014) (article 25 of the Universal Declaration of Human Rights); it is also recognized as the right of people to nutritious, sufficient, and quality food, which the State will guarantee, in article 4 of the Political Constitution of the United Mexican States (DOF, 2023).

On the other hand, market dynamics governed by supply and demand have resulted in the hunger of large sectors of the population of the country and the planet, so the food market must

be subject to regulations and be subject to food-oriented public policies, considering the market as a social institution (Polanyi, 2003).

The formation and construction of cooperation and market networks between family farming and consumers imply the possibility of eliminating the income appropriated by intermediaries and overcoming asymmetric relationships. From consumers, there is a trend of alliance in favor of family farming and local food systems.

They are consumers who, from different positions and conditions, question the origin and identity of food, claiming and recovering tradition, locality, flavor, and recognition of local food cultures and culinary heritage. With their choice and consumption, they assume a critical position towards homogenized food systems, as a consequence of the industrialization of food (Contreras, 2019).

Territorial dynamics and new rural configurations generate possibilities and options for food supply from the proximity economy. In this framework, it is essential to incorporate the territorial dynamics of family farming and food systems in the definition of public policies. In Mexico, the food trade has a tradition in local markets or tianguis as meeting spaces between producers and consumers. However, their problems are complex, they are generally initiatives of small producers, without a territorial agri-food policy framework that promotes and regulates them.

Family farming is a social and economic option that contributes to the country's food sovereignty, based on articulating production and consumption in the territorial scope and the social construction of the market. Food sovereignty strengthens the conception of autonomy and the right of peoples to establish an articulated and own pattern of food production and consumption. Via Campesina in 1996, in the framework of the World Food Summit, considered that food 'is not a question of the market, but a question of sovereignty'.

The food sovereignty of peoples was formulated with precision in the declaration of Nyéléni, Mali, by social and peasant organizations from 80 countries, which considered food sovereignty as the '... the right of peoples to nutritious, culturally appropriate, accessible, sustainably and ecologically produced food and their right to decide their own food and production system. The above approach puts those who produce, distribute and consume food at the heart of food systems and policies, above the demands of markets and companies.'

The concept of food sovereignty demands the autonomy and right of peoples to choose and build their own paths and ways of food production and consumption. It represents a critique of the neoliberal food regime and system, where food security depends on markets, within the framework of power relations and food management as a political weapon.

Conclusions

The neoliberal food regime is accompanied and underpinned by the deregulation of trade, productive specialization, increased productivity, competitiveness, and the industrialization of agriculture. The increase in production and productivity undoubtedly plays a central role in meeting a growing demand for food, but it is no guarantee of food security that depends on the market. The neoliberal food regime established the guidelines for the organization and specialization of production and trade in Mexico, whose consequences are a positive agri-food balance, dependence, and food insecurity.

The permanence of family farming shows that agrarian activities are relevant for their contribution to income and the production of food for consumption and the market, contributing to food security and sovereignty. In the market, family farming maintains asymmetrical relationships with the intermediaries that dominate the destination of production, which limits production and its economic and social viability.

Family farming has the opportunity to contribute and strengthen production and consumption, taking advantage of the diversification of the rural economy and the strengthening of rural-urban links, with the social construction of markets. The social construction of the market favors overcoming the asymmetrical relationships of family farming with intermediaries, building a

territorially based food system, and advancing food sovereignty. In this framework, it is essential to incorporate the territorial food systems of family farming and markets in the definition of public policy.

Bibliography

- 1 Banco de México. 2023. Sistema de Información Económica. <https://www.banxico.org.mx/>.
- 2 CONEVAL. 2023. Consejo Nacional de Evaluación de la Política de Desarrollo Social Pobreza en México. <https://www.coneval.org.mx/Medicion/MP/Paginas/Pobreza-2020.aspx>.
- 3 Constitución Política de los Estados Unidos Mexicanos. Artículo 4º. 6 de junio de 2023, 2023. Última reforma, Diario Oficial de la Federación (DOF). México.
- 4 Contreras, J. 2019. La alimentación contemporánea entre la globalización y la patrimonialización. *Boletín de antropología*. 34(58):30-55.
- 5 Declaración de Nyéléni. 2006. Observatorio social de América Latina (OSAL). Año VII, Núm. 21. Buenos Aires, Argentina. 279-283 pp.
- 6 ENIGH. 2022. Encuesta Nacional de Ingresos y Gastos de los Hogares. Instituto Nacional de Estadística y Geografía. Tabulados básicos. México. <https://www.inegi.org.mx/programas/enigh/nc/2022/>.
- 7 Escalante, R.; Catalán, H.; Galindo, L. M. y Reyes, O. 2011. Desagrarización en México: tendencias actuales y retos hacia el futuro. *Cuadernos de desarrollo rural*. 4(59):87-115.
- 8 FAO. 1996. Organización de las Naciones Unidas para la Alimentación y la Agricultura. Cumbre Mundial sobre la alimentación. Documentos técnicos de referencia. 1-5 pp. <https://www.fao.org/3/w2612s/w2612s00.htm>.
- 9 FAO. 2004. Organización de las Naciones Unidas para la Alimentación y la Agricultura. El estado mundial de la agricultura y la alimentación. La biotecnología agrícola: ¿una respuesta a las necesidades de los pobres? Roma. 3-43 pp. <http://www.fao.org/3/Y5160s/Y5160s00.htm>.
- 10 FAO. 2021. Organización de las Naciones Unidas para la Alimentación y la Agricultura. El estado mundial de la agricultura y la alimentación. Lograr que los sistemas agroalimentarios sean más resilientes a las perturbaciones y tensiones. Roma. 1-21 pp. <https://www.fao.org/publications/sofa/2022/es/>.
- 11 García, R. 2007. Sistemas complejos. Conceptos, método y fundamentación epistemológica de la investigación interdisciplinaria. Gedisa. Barcelona, España. 39-69 pp.
- 12 Gutiérrez, S. A. y Molina, R. L. E. 2013. Sobre el concepto de sistema y circuitos agroalimentarios. In: el sistema alimentario venezolano a comienzos del siglo 21. Evolución, balance y desafíos. Facultad de ciencias económicas y sociales-consejo de publicaciones de la ULA. Serie Mayor. Mérida, Venezuela. 1:23-42
- 13 Holt-Giménez E. y M. A. Altieri 2013. Agroecología, soberanía alimentaria y la nueva revolución verde. *Agroecología*. 8(2):65-72.
- 14 Holt-Giménez, E. 2009. Crisis alimentarias, movimiento alimentario y cambio de régimen. *Ecología Política* Núm. 38. 73-79 pp.
- 15 Holt-Giménez, E. y Raj, P. 2012. ¡Rebeliones alimentarias! La crisis y el hambre por la justicia. Universidad Autónoma de Zacatecas-Miguel Ángel Porrúa, Ed. México. 5-76 pp.
- 16 INEGI. 2019. Instituto Nacional de Estadística y Geografía. Encuesta Nacional Agropecuaria. <https://www.inegi.org.mx/programas/ena/2019/>.
- 17 Jusidman-Rapoport, C. 2014. El derecho a la alimentación como derecho humano. *Salud Pública de México*. 56(1):86-91.

- 18 McMichael, P. 2015. Regímenes alimentarios y cuestiones agrarias. Universidad Autónoma de Zacatecas-Miguel Ángel Porrúa, Ed. México, DF. 15-97 pp.
- 19 OECD-FAO. 2022. Organización para la Cooperación y el Desarrollo Económicos- Organización de las Naciones Unidas para la Alimentación y la Agricultura. Perspectivas Agrícolas 2022#2031. OECD Publishing. Paris, Francia. 21-90 pp. <https://doi.org/10.1787/820ef1bb-es>.
- 20 Otero, G. 2013. El régimen alimentario neoliberal y su crisis: estado, agroempresas multinacionales y biotecnología. Antípoda. Revista de Antropología y Arqueología. 17:49-78.
- 21 Pérez, C. E. 2012. América Latina: nueva ruralidad y exclusión social. Polígonos. Revista de Geografía. 15:171-199. Doi:<https://doi.org/10.18002/pol.v0i15.475>.
- 22 Polanyi, K. 2003. La gran transformación. Los orígenes políticos y económicos de nuestro tiempo. Fondo de Cultura Económica (FCE). México, DF. 105-127 pp.
- 23 Santos, M. 1996. Metamorfosis del espacio habitado. Oikos-tau. Barcelona. 45-57 pp.
- 24 SAGARPA-FAO. 2012. Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación y Organización de las Naciones Unidas para la Alimentación y la Agricultura. Diagnóstico del sector rural y pesquero: Identificación de la problemática del sector agropecuario y pesquero de México 2012. México, DF. 50-102 pp.
- 25 Shanin, T. 1979: Naturaleza y lógica de la economía campesina. Cuadernos anagrama. Barcelona, España. 40-57 pp.
- 26 Triches, R. y Schneider, S. 2015. Alimentação, sistema agroalimentar e os consumidores: novas conexões para o desenvolvimento rural. Cuadernos de desarrollo rural . 12(75):55-75.



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