



Editorial

Impasses in transformation of the food system



Dr. Walter Belik is a Full Professor of Economics at University of Campinas, Brazil, where over the span of six years he was the Coordinator of the Center for Food Studies. Also he was member of the National Council of Food and Nutrition Security and developed and coordinated the "Latin America and the Caribbean without Hunger" Initiative. He is a member of the Editorial Board of the Future of Food: Journal on Food, Agriculture and Society.

Last year, the UN statistics division released its new estimate for the world population reaching 9.8 billion in 2050. Earlier forecasts predicted that world population would reach its peak of 9.3 billion in 2050 with a slow growth or even decline thereafter. However, the new figures still allow a certain growth – above the replacement rate and until a date closer to 2100. This global reevaluation is due to the persistent growth of the birth rate in countries in Africa and in the East.

These population's scenario of 2050 is beyond the short time of SDGs - Sustainable Development Goals, which are expected to be reached by 2030, but still very near in time to impose some planning on World Food System issues. This issue is increasingly present in the specialized media, which have been treating the issue with some panic and alarmism, especially after the rise in food prices at the end of the last decade. The arguments are sparsely presented, but on the whole, they offer a "Malthusian" revisiting.

The main catastrophist ideas start from the distress of establishing a future expansion of food production beyond population growth. These authors show that yield increases in the main crops, namely rice, maize and wheat (the food base of mankind), are almost stagnant. Furthermore, hardly any new leaps can occur in the fu-

ture from the current stock of technologies established by the Green Revolution from the 1950s. Adding to this are variables linked to demand, such as the allocation of current agricultural areas to produce energy biomass, changes in the diet of developing countries towards the greater consumption of meat, with consequent greater use of fertile land and, not least, the need to cut the contingent of undernourished people that now number approximately 800 million individuals.

In short, new solutions will have to be put into practice quickly considering that the climate change picture, with a higher frequency of crop frustrations, is already making itself present. Food-producing countries see this imbalance between supply and demand as a great marketing opportunity. At the same time that the FAO (Food and Agriculture Organization of the United Nations) announced the need to increase agricultural production by 60%, political leaders of producing countries, such as Brazil, promised an increase in supply of 100% by 2050. In the past, theorists of the caliber of Josué De Castro and Amartya Sen had already disqualified the arguments for this imbalance. In analyzing the case of chronic famines of the 19th and 20th centuries, the Brazilian demonstrated that overpopulation was not the cause of undernutrition in several parts of the world. On the contrary, food insecurity was the main element that led to



population increases, predominantly rural, considering that more workforce was needed to increase production (Castro, 1946). Amartya Sen, in turn, drew attention to the fact that in history, the many cases of food deprivation of certain populations occurred, contradictorily, in periods of plenty. The Nobel laureate in Economics in 1998, Amartya Sen, had been humiliated by the Director-General of FAO after the launch of his book "Poverty and Famines: An Essay on Entitlement and Deprivation" in 1981 stating that the "... book was absolutely the worst book on food and famine that he had ever read" (Sen, 2013: 2). The eminent Indian later warned the international community that the FAO was negligent about the problems of adequacy of food production because of the "persistent attempt to see hunger through the lens of agricultural production" (Sen, 1997: 9).

It is interesting to realize that the Hot Springs Conference of 1943 – which gave rise to the FAO in anticipation of the end of World War II – concluded that in a growing world there should be greater regulation in agricultural markets avoiding the problem of food scarcity (Timmer, 2010). For example, it was recommended that there be a Central Bank of Foods (The World Food Board) proposal controlling the world stocks with reserves for the fight against malnutrition (Friedmann, 1982). Coincidentally, the surplus of American grains had been accumulating since the late nineteenth century, becoming permanent at that time and setting a period of falling international prices. In any case, there was no agreement among the countries. Therefore, this proposal did not go forward, leaving a mismatch between the demands of nutrition and agricultural production.

Any discussion on the future of the food system must go through a critique of the elements that normally link the dynamics of food markets with the dynamics of agricultural production. The determinants of the market and the production of food are distinct, and the understanding of their contradictions allows us to move towards the transformation of the Food System as a whole. However, in the narrative of large corporations, the controversial themes in the spheres of production and consumption are reworked and returned vested by a new exteriority, seemingly without conflicts or need of regulation. For example, consumer concerns regarding sustainability, ethics, and decent work, among others, are requalified from the use of stamps, certificates and actions of Corporate Social Responsibility. This allows the agricultural production to adapt to the new times without risks that imply in a change of productive paradigm. These adaptations are part of a regulatory system with public-private features that allow corporations to capture certain quasi-rents derived from the bio-economy (Marsden and

Fariolli, 2015). Sustainable transgenic soybeans (which require only small, selective amounts of agrochemicals), organic beef (which feeds on natural pastures), and agriculture with regularized labor (contracted through temporary labor cooperatives with no rights) are some examples of how it is possible to turn certain situations "green" and away from the real situation of agriculture, industry, and "dirty" exports.

For a more complete analysis of the characteristics of the Food System, we will take three constituent elements that can account for an updated approach to the present production regime, namely: the food supply chain, the food environments (physical context and culture), and consumer behavior (HLPE 2017).

Supply chain

Fordist era, the transformation of the food system, still involves some paradoxes that refer us to the rustic world of the local producer. It is curious to note that two of those paradoxes called our attention, and thus I want to emphasize them here:

1) The role of technology: In the so-called variety regime (Coriat, 1997), with its differentiated markets, the act of processing the food leads to a decrease in its added value. Contrary to being common, "more natural" products require more technology. Large investments in technology are being developed to make the most natural products with more texture, aroma etc. In addition, the distance and durability pattern (Friedmann, 1994) demands larger investments in distribution – attracting companies from the logistics and commercialization sector. The physical distance is to a decreasing degree a barrier to commercialization, although there is a growing rift between the field and fork. The technology allows us to call it a "fresh" product, even though it has been produced hundreds of miles from its production site.

2) No matter how the food system is globalized, its spaces and places act to reconfigure this system (Marsden, 2014: 20). The post-Fordist system of food production is placed in a decentralized and flexible way, incorporating the peculiar characteristics of each given geographic space (Jha & Chakraborty, 2014).

Food Environments

According to the latest FAO SOFI, malnutrition has been rising. Despite the struggle and commitment to achieving the Sustainable Development Goals, indicators have been increasing in the last two years, reaching 10.9% of the world population, or 821 million individuals. Extreme



climatic events brought about by climate change have led to increases in food prices, but more than that there is a promiscuity between commodity prices and the use of these as derivatives in hedge contracts.

The financialization of commodities became evident during the subprime crisis of 2008. In that year, 40% of the transactions in the international markets of commodities were of the non-commercial type. In particular for the case of foods, the participations varied by 30% for the case of sugar and 45% for soybeans. In the international market, commodity-backed securities in general represented US \$13 billion in 2003, reaching US \$393 billion in 2011 (US \$92 billion for food), and a record US\$ 451 billion in April of that year (Belik & Correa, 2013).

Throughout the 20th century, real food prices were falling, even considering the spiral of the early 1970s. To a large extent this was achieved with the generalization of pre-sale contracts between sellers and buyers. The introduction of derivatives based on 1991 agricultural commodity price indices on the New York Stock Exchange disrupted this trajectory and changed the dynamics of futures market. The speculation based in commodities was aggravated when years later – in 1999 and seduced by the exuberance of the markets – the US government reduced public regulations further distancing the operation of physical market from the real commodity supply needs. The bubble burst of technology companies in 2000 further increased the influx of "investors" in search of bonds backed by assets considered solid, such as agricultural commodities.

Volatility and price increases have different and complementary causes, whether in the short, medium, or long term. Climatic shocks can cause price increases from the perspective of future scarcity but the volatility of these prices, in turn, has nothing to do with the natural cycle of agriculture. However, with its financial use and the low elasticity of demand, some refer to a crisis of underconsumption in food. In the medium and long-term, without any productive motive, volatility pushes prices upwards which starts a new upward cycle.

Why does the system not balance?

Because consumption is becoming less sensitive to agricultural prices that occur in the short-term. For the rich, the elasticity is zero, while for the poor it is decreasing. Terry Marsden (2014) points out that there would already be a market saturation in the more developed countries, resulting in a steady decline in the value of the primary sector, despite the increasing expenditure of the consumer with food. In short, food demand would

be inflexible downward and current high prices would not have a significant impact on the primary sector.

Unless we are looking at the elite and the high-income markets, these movements place us further from a shift in the Food System toward reconnection with local circuits, reindependentization of agriculture, or what Ploeg (2010) calls recapture – introducing a new relationship between territory and food (Bowen, 2010). On the contrary, it is considered the current Corporate Food regime, in particular this new phase of neoliberal globalization, and as a deepening of the appropriation of nature (Dorr, 2018). Secondly, "There is growing recognition that the global food system does not aim to provide high-quality nutritional diets, social inclusion, decent working conditions, and environmental sustainability" (Dorr, 2018: 18).

Consumer behavior

The discussion on sustainability goes on through the discussion of consumption regarding the "metabolic rift", which is defined as the separation between people and nature (McMichael, 1999), and its disruptive tendency. In this, commercialization is the bottleneck for small and large agricultural producers. Furthermore, its recovery would reconnect the spheres of production and consumption – a challenging task for the retail networks and trading companies. Alliances between producers and consumers, the paradigm of agroecology, the so-called reflexive governance, and movements for food sovereignty, lead us to this new environment, but there are pitfalls along the way. The challenge is not to fall into the trap location where the "local is good, global is bad" (Marsden, 2014; Brunori et al, 2016).

Meanwhile, our reality shows that the expected reconnection movements are only marginal. There is no clear trend towards reconfiguration of the agrifood system. The presence of a new regime based on variety is growing but it is not the end of mass production, although there is an increasing relevance of aspects related to product quality. According to Coriat (1997), it is a regime of variety as a post-Fordist variant. In this case, "quality conventions" are of great importance, yet there is no legislation established in global terms. Even the general guidelines of the Codex Alimentarius can be overcome in coping with the hygienist collusion (Delfosse & Letablier, 1995), which excludes producers.

I hope that with these examples we can enlighten the debate about the difficulties and the obstacles that are posed for the reconversion of the system to feed. The tasks are manifold: to give access to the still huge contingent of malnourished people, to guarantee food sov-



ereignty for everybody and diverse population groups, and to interrupt the processes of production and consumption that attack the environment. The great question is how to promote this transition in an environment in which political forces are increasingly disorganized. The current Volume 6 Issue 2 of the "Future of Food: Journal on Food, Agriculture and Society", on the theme of "Impasses in Transformation of the Food System" contains papers providing insight to these issues from various regional and global perspectives. Furthermore, this edition is enriched with expert views and book reviews that bring a critical outlook of the thematic issues.

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