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TECHNOLOGY AND DEMOCRACY: WEAPONS AGAINST HUNGER

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The Conference of the United Nations food and Agriculture Organisation (FAO), took the decision in November 28, 1979, celebrate every year the World Food Day on 16 October. This commemoration aims to increase public awareness about the nature and dimensions of the problem of world power in the long term in order to stimulate the national and international solidarity in the fight against hunger, malnutrition and poverty.

On October 31, 2011, the United Nations Organization (UNO) communicated to the world the birth of seventh billionth human being. The impact of this population in food production is the great challenge to be overcome by the global society. Issues such as food security and how we will feed this population are at the heart of discussions on the future of the planet and of our species. Food production and the reasons for hunger halfhearted are themes that are more complex than might appear at first sight. Some questions that plague those concerned about the subject are the following:

The current production of food is sufficient to feed this population?

Currently Yes. The green revolution allowed, since the 1950s, an exceptional increase in agricultural production, fueled by new technologies, which surpassed the also awesome human population growth. With the aid of increasing efficiency of commercial ocean fishing – which is devastating the seas – and the expansion of animal husbandry (notably of animals confined), practically the whole world come a greater amount of food per capita than it did 50 years ago.

Despite the increase in population, all continents met, between 1961 and 2003, an increase of the average amount of calories consumed daily by its inhabitants, including the Africa South of the Sahara. In this continent, progress was only 6.1% against the average of 38.8% of all developing countries (FAO data). The world as a whole went on to have at its disposal almost 25% more food energy per capita during

this period. Of course, this average conceals differences (3,739 kcal/person day in North America versus 2,272 kcal/person day in Africa, e.g.). But, the fact is that on all continents, people began to eat more since the early 1960.

The relative number of undernourished people on the planet is falling, although in pace that proved, in recent years, insufficient to reduce the total number of hungry in absolute value. In the early 1970s, 920 million had chronic hunger, or almost 25% of the global population. In 2003-2005, this percentage had declined by 13%, equivalent to slightly less than 840 million people (FAO). Data for this year indicate that the undernourished, something complex to define, back-to-back 925 million (World Food Programme), but still below 14% of the world's population.

What are the projections of increased food production in comparison with the human population? The consumption of cereals – global power base – grew sharply since the 1950s. Between 1961 and 1991 that increase was of 109% against 74% increase in the number of human beings. However, since the mid-eighties, approximately, but the production grows more than the population, but grows less well. Between 1985 and 2000, cereal production took a leap of 19.6%, but the population was even greater: 26%. Another example: in the period 1995-2004, the consumption of cereals rose 9.6% versus 12.6% of world population growth.

Will the growth of agricultural production above the demographic expansion remains? And for how long? The truth is that physical limits and restrict already obviously restrict further expansion of food. Soil compaction and erosion, pollution, reduction of water resources, loss of soil organic matter, flood and salinization of irrigated land, over-exploitation of fish stocks and pollution of the seas represent barriers to increasing supply of food.

All this problematic is the central question of Food and Farming Futures Report produced and published recently by the British Government. The document warns that in 20 years, world population will reach approximately eight billion people and, consequently, the demand for food – which is no longer being supplied – will increase even more.

According to the report, to avoid the increase of global hunger, food production is expected to grow 40% over the next two decades and, of course, in a sustainable manner, to ensure the preservation of the environment.

Still according to the document, to achieve this goal it is necessary to draw up a large set of actions, covering various sectors involved in the production system. Among

them: biotechnology, agronomy and agroecology, beyond the area of scientific research, which will be an important ally to predict future problems of food – on account of climate change and overpopulation, among other factors – and help find solutions to fight them.

The report, which counted with the collaboration of 400 experts from 35 countries, still cited the social policies adopted by Brazil as important examples of combating hunger and poverty. According to the document, the Brazil proved that "with the right tools and with political will, it is possible to reduce hunger and poverty". Also hit of Brazilian agronomy – research, rural extension and technical assistance – in extraordinary increase of productivity and the rational and sustainable occupation of biomes so far not used in production in scale.

The importance of biotechnology that struggle is fundamental. The Brazil out of a total scientific position for another delay dealing and admired even by the USA. The transgene seems to have no back, because it brings technological solutions to important problems of agriculture, as in costs, due to pests, diseases and climatic factors.

With the integration of technologies – organic and conventional genetic engineering – the Brazilian agricultural production increased by more than 100% over the last twenty years, while the total area planted grew up just 25%, which is explained by the gains in productivity by adopting best practices of correction and soil fertilization; more efficient control of pests and diseases; conventional genetics and biotechnology; management of processes.

Don't forget that good technology is one that brings freedom and not one that traps, making the production dependent on it. We must give freedom of choice to producers and consumers, having available technology of genetically modified products, conventional and organic, i.e. also in increasing productivity democratic environment is required.

Both conventional agriculture, the Green Revolution, as the organic has a space to improve efficiency, especially the last. Agricultural productivity grew by 146% between 1963 and 2009, according to the FAO, and should continue to grow, especially in developing countries. This and further measures considered above – all feasible – they must avoid the continuing expansion of agriculture, always at the expense of natural habitats, which are essential for the proper functioning of the system Earth.

The debates on the future of food are heated and controversial. This is understandable, because besides being a complex issue and vital for the human species, it is somewhat of futurology, despite extrapolations and refined techniques of projections. However, even the most optimistic and the sectarian faithful know that technology – in order to dispel the risk of a collapse future-good precaution indicates the need for reform in modern power, reducing dependence on animal products, and a sharp decline in growth rate of world population. All this issue necessarily democratic stances of societies, so that the natural law of human feeding sufficiently can meet everyone. In the 21st century is possible "dream" with this future a reality.