The Green Revolution: From crops for food to crops for domination

In 1944, the Rockefeller Foundation funded the introduction of a series of technologies in Mexican agricultural production. This gave rise to an agricultural production model known as the “Green Revolution” with a central concept of “high yielding varieties” developed in the framework of monoculture crops supported by a technological package including mechanization, irrigation, chemical fertilization and the use of toxic chemicals to control pests.

Throughout the sixties and seventies, FAO disseminated these technologies all over the world, announcing that the Green Revolution science was a “miraculous” recipe to achieve prosperity, solve hunger in the world and secure peace.

The application of this model has had –and continues having- an enormous impact on deforestation rates through the substitution of forest areas by large scale monoculture cash crops. Furthermore, the Green Revolution not only did not solve, but worsened the problem of world hunger, contributing to the loss of rural communities’ means of subsistence and to rural to urban migration. The great majority of today’s shanty towns in the cities of the South are a direct result of the application of this model.

Examples are abundant. At one time the Punjab region in India was advertised as a model for the Green Revolution. However, twenty years later the results are different. Instead of a land of plenty, Punjab now has soil erosion, crops infested with pests and indebted and discontent farmers. Instead of peace, Punjab has inherited conflicts and violence.

The introduction of “miraculous” seeds was based on a measure of output that ignored the context surrounding cultivation systems. The symbiotic relationship between soil, water, farm animals and plants, characteristic of indigenous and traditional agriculture was transformed by the Green Revolution into the interaction of inputs: hybrid seeds (and at present, increasingly transgenic seeds), irrigation and agrochemical products (fertilizers, pesticides, weed-killers). In assessing output, the interactions of this package with the soil and water systems – noxious environmental impacts- are not taken into account.

In fact, the characteristic trait of Green Revolution seeds is that they respond extremely well to certain external inputs, such as fertilizers and irrigation. However if these fail their output is worse than that of the traditional varieties. Furthermore, the strategy of increasing the production of a single agricultural component is done at the cost of decreasing other components and increasing external inputs. Thus a “high yield” may soon not be so if considered at a system level. In this respect, the measurement of output is restricted to the commercial aspect of crops and it sacrifices other uses of the plant. In this way, increased production of cash crops was achieved at the price of less biomass for animals and soil and a drop in the ecosystem’s productivity due to an excessive resource use.

The Green Revolution created a framework for the entry of the commercial sector into agriculture on establishing dependency on hybrid seeds –the basis of a private seed market– with reduced genetic diversity. Centuries of farmer innovation were abandoned. With the Green Revolution, western

capitalism penetrated into the deepest part of agricultural production and traditional diversity was substituted by large scale cash crop farming, aimed at exports and sustained by a system of large banks funding seed and agro-chemical companies, with intermediaries and multilateral bodies fostering the model.

Not only is local biodiversity lost –it is calculated that over the past 100 years, agricultural genetic diversity has dropped by 75 per cent– but self-sufficient agricultural practices are also lost. In turn, small and medium-sized farmers have become the prisoners of indebtedness to enable them to purchase external inputs and of markets over which they have no control whatsoever.

In a “globalized” world, agriculture has lost the essence of producing food and has become yet another merchandise factory for market ploy, which in turn is in the hands of major capital owners who use it to dominate the world. But in the world of human beings, farming is still something different. In the sense of the Zapotecan indigenous people of Oaxaca, Mexico: “When corn is sown, four grains are thrown in at a time, one is for wild animals, another is for those who like other peoples’ property, another one is for feast days and the last one is for family consumption. The western criteria of output, efficiency and productivity are foreign to Zapotecan culture. Corn is not a business, it is a food for subsistence and that makes us happy, that is why before planting it we bless it to ask for a good harvest for all of us.”

Article based on information from: “The violence of the Green Revolution”, Vandana Shiva, 1991; “Intellectual Property Rights: Ultimate control of agricultural R&D in Asia”, GRAIN, http://www.grain.org/briefings/?id=35 ; “El día en que muera el sol”, Silvia Ribeiro, Biodiversidad, sustento y culturas, Nº 3º, July 2004.