Source: lavaca

This report reveals how soy monoculture is advancing in Argentina, Brazil, Bolivia, Paraguay and Uruguay, bringing about deforestation, land consolidation, and evictions. Darío Aranda traces here the geopolitical and economic cartography of the trend.

Soy's great homeland spans Brazil, Argentina, Paraguay, Bolivia and Uruguay. These five countries together count 47 million hectares of transgenic soy, the cornerstone of a trend that is in truth only one part of a wider trend: agrobusinesses. And given their high consumption of agrochemicals, the main beneficiaries here are transnational agricultural corporations. This model, characterized by high levels of concentrated capital and social and environmental consequences, tends to take fruit in moments when the region has seen self-described “left” or “progressive” governments.

Soy constitutes:

- 66% of cultivated land in Paraguay.
- 59% of Argentina
- 35% of cultivated land in Brazil.
- 30% of Uruguay.
- 24% of Bolivia.
- Between the five countries, 44% of cultivated land has only one crop: soy.

Industrial agriculture

The history of soy in the region goes back more than a hundred years. However, “it has been in the last 40 years, and particularly in the last 20, that it has seen a rapid transformation and expansion via the model of industrialized agriculture”, explains the recently published investigation Soy Production in the Americas: Update on Land Use and Pesticides, produced by the recognized Norwegian Center for Biosafety. The report addresses—for the first time in geopolitical terms—“soyization” as a regional problem.

The work analyzes the situation in Argentina, Paraguay, Brazil, Uruguay and Bolivia in detail. And it finds parallels: transgenic soy grew in all of these countries, it involved the takeover of new territories (by clearing them), it led to the fall of other crops, it raised notably the use of pesticides, and it saw all five countries putting vast swaths of their territory at the disposal Europe and Asia's needs. Some facts:

- Since 1996, when transgenic soy was approved in Argentina, seeded areas increased by 25 millions hectares in 14 years.
- Brazil and Argentina are the most diligent students of the agro-business model. 90% of the area used for soy in the region is concentrated in the two countries: 23 million hectares in Brazil, 19 million in Argentina.
- “In 2009, Brazil, Argentina, and Paraguay registered the highest national indexes of increase in seeded surfaces for this crop”, the investigation points out, and outlines:
- In 2010, the five countries seeded 47 million hectares with soy. Of this number, Brazil represented 50%, Argentina 40%, Paraguay 6%, and Bolivia and Uruguay 2% respectively.

- 36% of arable land in Brazil, 59% in Argentina and 66% in Paraguay was filled by soy crops.
- “The era of accelerated growth began with the approval of genetically modified soy varieties for commercial production”, confirms the work, placing the origins in 1996 when Argentina approved (without carrying out any national studies) transgenic soy.

Consequences:

- In 1991, 5 million hectares were seeded with soy in Argentina. In 2010, 19 million hectares were seeded.
- In the same period, Bolivia went from 190,000 hectares to 920,000.
- Brazil went from 9.6 million hectares to 23 million.
- Paraguay from 550,000 to 2.7 million.

- Uruguay from 20,000 hectares to 860,000.
- Between the five countries, total hectares went from 15 million to 47 million.

By increasing seeded areas, the size of the harvest also increased. In 2009, the total production of the Southern Cone came out to 116 million tons, of which 57 and 52 million were harvested in Brazil and Argentina respectively. This volume of production made Brazil the second and Argentina the third largest producers of soy in the world. In 2010, both countries increased their production: 68 million in Brazil and 50 million in Argentina.

Fewer trees

The Norwegian Center for Biosafety points out that:

- In 1991, Argentina had 34.5 million hectares of forests, and in 2009 this went down to 29.6, a decrease of 14%.
- In Bolivia forests were reduced by 8%: from 62 to 57 million.
- Brazil went down 9%: from 571 to 521 million hectares.
- For Paraguay, 15%: from 21 to 17 millon.

The database of the National Directorate of Native Forests of the Secretary of the Environment shows that in Argentina, between 2003 and 2004, 550,000 hectares of forest were replaced by soy in the provinces of Chaco, Formosa, Salta, Santiaga del Estero, and Tucumán. “As areas cultivated with soy increase rapidly, forest zones decrease”, the report summarizes.

In our own territory in 1991, forested land was almost 7 times bigger than any with soy cultivation. Before the monoculture fever, the relationship was as follows: for every hectare of soy, there were almost 7 hectares of forest. In 1996, the year that transgenic soy was approved, the forest-soy ratio went down to 4.96 and in 2009, 1.62.

Crop regression

As spaces seeded with soy increase, not only forests but other crops suffer as well:

- The total soy area in Brazil increased by 67% between 2001 and 2010, while corn only increased 4%.
- In Bolivia, the total area cultivated with corn reduced 3% even as soy increased 50%.

- In Paraguay, in the same period, the yuca crop went down by 27% and soy increased by 99%.

“The most dramatic case was in Uruguay, where the sunflower decreased by 72% while soy increased 70 times from 2001 to 2010”, alerts the investigation. In Uruguay, in the last decade, pastures destined for milk cows reduced 15% (150,000 hectares), while pastures to graze cows for meat were reduced by 30%. “The main soy-producing countries in the Southern Cone have lowered their local supply of food since 1996”, confirms the Norwegian organization.

Few hands

The majority of soy production in the Southern Cone takes place on properties larger than 500 hectares.

- In 2006 in Brazil, 5% of soy producers controlled 59% of the total seeded area of the crop.
- In Bolivia, in the 2009/10 season, 2% of producers occupied 52% of all soy areas.

“This process of land consolidation amongst a few landowners has become more pronounced. As a consequence, a lower and lower number of producers manage bigger and bigger areas, reaching management units of 2,500 to 5,000 hectares in Argentina, Brazil, and Paraguay”, signals the report.

The report confirms what peasant organizations and many researchers have warned for a decade: soy production and land consolidation go hand in hand. And it follows a vicious cycle: the majority of production comes from agricultural systems that are highly industrialized (transgenic seeds, agro-chemicals, and machinery); the intense industrialization of production implies the increase in capacity of investment for producers; and this comes from the gradual marginalization of small-scale farmers or ones with a reduced ability to invest.

- In Paraguay, in 2005, 4% of soy producers controlled 60% of the total of all areas with this crop.
- In Brazil, in 2006, 5% of soy producers controlled 59% of all area dedicated to this crop.
- In Bolivia, during the 2009/10 season, 2% of soy producers controlled 52% of production zones.

- In Argentina, in 2010, more than 50% of soy production was controlled by 3% of all producers, in units of land larger than 5,000 hectares
- In Uruguay, in 2010, 26% of producers controlled 85% of all land seeded with soy. In the same year, 1% of all producers had in their control 35% of surfaces cultivated with soy.

More poison

The widespread adoption of trangsenic soy and the implementation of direct seeding are the principle causes of the exponential increase in the use of agrochemicals, in particular glyphosate. Another factor is the appearance of weeds resistant to herbicide, which provokes an increase in the use of other, complementary pesticides, themselves even more toxic (24D and paraquat). “The paraquat herbicide has been banned in Europe, but its importation and application in the Southern Cone is rising”, the investigation argues.

- Paraquat is the active ingredient in one of the most commonly used herbicides: gramoxone, developed by the Swiss company Syngenta. “Toxicological studies have linked paraquat with neurological disorders (for example, Parkinson's disease) as well as reproductive diseases. For this reason, in 2003, paraquat was banned in 13 countries in the European Union”, the work confirms, going on to explain that it was finally banned in the whole EU in 2007.
- In Argentina, in 2010, 1.2 million liters of paraquat were used.
- In Bolivia, in 2008, 1.7 millon liters.
- In Brazil, soy producers used 3.3 million liters of paraquat in the five biggest states alone in 2009.

Geopolitics

The investigation highlights that the massive production of soy in the Southern Cone is “deeply influenced by the globalization of the economy”, since the demand originates in “geographically distant regions”: Europe and China. What is the destiny, then, of this soy that bears down on Latin American soil? Animal feed and raw material for agrocombustibles. The report concludes: “The demand for soy in Europe impacts the dynamic of land use and pesticides in South America”. And it details the direct socioeconomic implications:

“Local needs (for example, demands for products not destined solely for exportation) lose their relevance in the productive dynamic. One clear example is the use of dangerous materials

(paraquat) or risky technologies (the production of transgenic soy) in the productive countries of the Southern Cone, when in parallel these same materials and technologies are banned in the regions where demand comes from (Europe). There are differential standards for environmental protection and public health between the places where the demand emerges and where commodities are produced".

Corporations

The model of agro-businesses, of which soy is only one of the most visible facets, is characterized by the control that big multinational agricultural corporations exercise in the process. An emblematic situation can be seen in the seed market: "In the first half of the 20th century, seeds where indisputably in the hands of farmers and the public sector. In the decades since, they are monopolized by the genetic giants: corporate power. And that is how they draw the last line in the sand in the commodification of life". Let's see how:

- The market for patented seeds represents 82% of commercial seed markets in the world.
- In 2007, the global market for commercial patented seeds was worth 22 billion dollars.

"The ten main companies together make 14.785 billion dollars, 67% of the global market of patented seeds", it explains. The main seed companies are Takii (Japan), DLF-Trifolium (Denmark), Sakata (Japan), Bayer Crop Science (Germany), KWS AG (Germany), Land O' Lakes (United States), Groupe Limagrain (France), Syngenta (Switzerland), DuPont (United States) and Monsanto (United States).

In less than three decades a handful of multinational corporations have created a rapid and ferocious corporate siege on the first link of the food chain", explains Grupo ETC, going on to explain that Monsanto controls 23% of the global market for patented seeds. "Monsanto's seeds and biotechnological traits (which include those ceded to them under license from other companies) represent 87% of the total world area dedicated to genetically manipulated seeds in 2007", details Grupo ETC's investigation.

The trend

This past June 15th, in a lunch at the head office of the Council of the Americas and in front of the biggest United States companies, President Cristina Fernández de Kirchner told the audience:

"Just a minute ago I was with Monsanto, who was announcing to us a very important investment in corn products (…) And what's more they were very happy because Argentina today is, shall we say, at the vanguard of the field of biotechnological events. Here I have, and

this is the truth that I want to show you all because I am very proud, Monsanto's prospectus. You see, when they make a prospectus it's because the investment has already been made—if not they will not give you the prospectus. So, we have a very important investment in Malvinas Argentinas, in Cordoba, in corn products with a new, let's say, seed with a transgenic character, called Intacta".

That same week in Cordoba the first criminal judgment was layed out for pesticide spraying. After ten years of struggle, the organization Madres de Ituzaingó Anexo (women who got organized after their children and their neighbors got sick) brought two soy producers and one crop-duster to trial.

The President explained that Monsanto's announcement would help to realize the Strategic Agri-food Plan (PEA), a program filled with goals set by the national government, the provinces, companies and academics which focus on, amongst other points, increasing grain production by 60%: going from 100 million tons (half of which is soy) to 160 million for 2020. This essentially means expanding into new territories, today in the hands of peasants and indigenous peoples.

On Wednesday, June 27th, from San Luis and on national television, the President went one step further: "I dream that in my Patagonia, a steppe, we can also start intensive corn foliage production (…) We know, too, that we are going to make the corn with a transgenic variety, which will allow us, precisely in that location, to create one of those zones where we can push the frontiers of agriculture, science, and technology".

The report:

The investigation, "Soy Production in the Americas: Update on Land Use and Pesticides" was coordinated by the researcher Georgina Catacora Vargas, of the Norwegian Center for Biosafety, a space dedicated to research and teaching around genetic technologies and their consequences for the environment and for health. The survey and information processing took six months of work by researchers and journalists from Uruguay, Argentina, Brazil, Paraguay and Bolivia (this author was the Argentinian counterpart for the production). In 50 pages, complete with statistics and graphs, they take on a well-known reality in each one of the five countries, but one which has rarely been treated as a regional phenomenon. Dated January 2012, it was publicly distributed on August 6th, 2012. This synthesis was published in the July edition of our magazine Mu, el periódico de lavaca.