

The New Bonfire of Vanities: Soybean cultivation and globalization in South America

EDUARDO GUDYNAS *ABSTRACT* Soybean agriculture has expanded to become one of the leading export products in several countries, providing high economic benefits but with strong social and environmental impacts. Eduardo Gudynas argues that soybean agriculture represents the forefront of a great transformation in rural life as agribusiness oriented to global markets expands and takes over traditional farming. This transformation is marked by management rather than ownership of land, with control over production processes, privatization of resources, outsourcing and commodification replacing traditional farming activities. He warns that small farmers, peasants and indigenous groups are threatened with deepening marginalization and exclusion as the relentless logic of the market pushes them to relinquish control of their land.

KEYWORDS *environmental impacts; social impacts; agriculture; global drivers; environment*

Introduction

The dramatic expansion of soybean agriculture in South America offers many contrasting features, such as increasing export flows and huge economic benefits, alongside small farmers' marginalization and important environmental impacts. Regardless of these tensions, the soybean monoculture expands each year like a bonfire of vanities, expressed in the luxury of the global financial brokers built on the poverty of local victims, with faulty regulatory systems unable to handle negative impacts and souring dreams of prosperity.

The situation with soybean is the clearest expression of a radical change in South American agriculture. These changes are not a gradient shift resulting from a deepening of past problems, but a critical transformation in rural life. This change results from market reforms during the 1980s and 1990s, the current dynamics of global trade and finance, the limitations and possibilities of the nation-state and the reshaping of rural actors.

Soybean expansion in South America

Soybean is a valuable crop with high nutritive value, serving both as human and animal food. It has been cultivated for a long time in South America, although it was not a

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primary crop until recently. In the last ten years, it has dominated agriculture in the 'Southern Cone' countries: Argentina, Bolivia, Brazil, Paraguay and Uruguay. Brazil is now the second largest world producer and Argentina the third. Paraguay has the world's largest percentage of its agriculture land devoted to soybean (an estimated 10 percent of the total agricultural land), while the fastest increase in production is in Uruguay (Gudynas, 2007, www.agropecuaria.org).

As the largest producer in the Southern Cone, Brazil has more than 22 millions hectares (ha) devoted to producing around 60 millions tons of soybean. The crop started in southern Brazil but more recently expanded in the ecoregion of Cerrado, a large scrub savanna in the centre of the country. Argentina has 17 million ha devoted to soybean, resulting in around 48 million tons, most of them grown in the richest soils in the country's centre, which pushes other crops and cattle to other regions. A similar process is found in Uruguay, where production jumped 2.636 percent from 2000 to 2007. Soybean replaced subtropical forests in eastern Paraguay, and lowland forests in Bolivia. Processing is particularly intensive in Argentina, which has the largest crushing facilities, and where large stocks of grain from adjacent countries are also processed.

The aggregated production of the five countries (all members of the MERCOSUR trading block) surpasses 116 million tons, constituting the first soybean-producing region in the world. Soybean became the leading export in most of these countries. In Brazil, soy exports reached US\$11,400 millions in 2007, representing 20 percent of total agribusiness exports.

The expansion of soybean started through a trade window with the European Union, to produce oils and meal (for uses such as feeding cattle and chicken) (Lapitz *et al.*, 2004). The availability of a new technological package was another critical factor (including new procedures not involving tilling, and transgenic seeds). Increased demand from China and other Southeast Asian countries then boosted production, and demand increased even more with the production of soy-based biodiesel. Chinese demand is related to the changes in food habits (pork and chicken fed

with soy derivatives are becoming the major source of proteins in the diet).

Other factors also contribute to a notable increase in price, such as the weak dollar in most South American countries, the replacement of soy with corn for bioethanol in the US, the climatic situation in Australia (affecting agriculture productivity) and the effects of speculative funds that shifted to the commodities market after the subprime crisis in the US. Prices reached over US\$500/ton, a historic peak. These high prices are a component of the 'commodity supercycle', due to long-term sustained demand.

Thus, soybean agriculture moves along with the waves of globalization. Each time factors such drops in US production or increases in the demand from China take place, forecast studies and market analysts emit signals that move up or down the expected future prices. Transnational companies, national agribusiness and local farmers make decisions based on these signals. Thus, international trade organizations, particularly the Chicago Board of Trade (CBOT), become key 'global gateways' in regulating world prices and world trade, but also capital (investment decisions on this crop). The expanding reliance on future prices results in a series of financial instruments that are now widely used as indicators for loans, investment decisions and loan agreements, but also opens the door for speculative actors. Regional future markets are now operating in Rosario (Argentina) and São Paulo (Brazil).

Soy world trade is concentrated in a few large transnational companies that operate as gatekeepers. For example, in Brazil such companies include Bunge Alimentos, Cargill, ADM and Dreyfus, plus large national companies such as AMaggi.

In this context of global trade, decisions on agriculture are not determined by national policies, but by global dynamics. The role of the nation-state is weakened, and farmers and traders are linked into a global network of primary agricultural products, foodstuffs and agrofuels.

Environmental and social impacts

The economic benefits of soybean contrast with its social and ecological impacts. Direct 513

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environmental impacts include soil degradation and nutrient imbalances in some areas, and water and soil contamination due to agrochemicals in others. Continuous monoculture, without rotation with other crops or cattle, increases these negative impacts. In some areas, soy is the principal factor pushing the agriculture frontier over natural (previously uncultivated) areas, with a strong negative impact on biodiversity, particularly deforestation (Lapitz *et al.*, 2004). These impacts are critical in the subtropical forests and shrublands of northern Argentina, the lowlands in eastern Bolivia, the eastern forests of Paraguay and in some areas of the Cerrado ecoregion, in central Brazil, and also in Amazonian rainforest (Dros, 2004; Schlesinger, 2006).

Social conflicts are becoming more acute and more complex. Soybean expansion includes land concentration in some areas, but more frequently the loss of control and management on owned lands (as discussed below). Increased land concentration has been reported in some areas of Argentina and Uruguay. Displacement and conflicts over land tenure faced by small farmers, peasants and indigenous groups have been denounced in different zones of tropical Brazil, northern Argentina, and eastern Paraguay and Bolivia. Among the most recent examples of the situation are the invasion by soybean farmers of the Xavante's land in Mato Grosso state (Brazil), and of Guarani-Kaiowá's areas in Mato Grosso do Sul (Reporter Brazil, 2008). Violence against local grassroots leaders is not uncommon in rural areas, and has been reported in Brazil, Paraguay and Argentina.

Soybean cultivation requires little employment (2 persons/year/100 ha, compared with ten in sugar cane, and 49 in coffee, in Brazil; Noronha *et al.*, 2006). Nevertheless, there are reported cases of work slavery in some farms in Brazil.

Furthermore, there is increasing number of cases of health and environmental impacts due to careless use of agrochemicals by large soybean farmers in all countries. The most frequent situation is the spraying of toxic chemicals over small towns by fumigation planes.

There are also indirect impacts. Soy expansion

replaces other crops, specifically pastures, and the displaced farmers and ranchers move to new locations, pushing further the agricultural frontier into wilderness areas, particularly in the Amazonia (Fearnside, 2001). Thus, cattle expansion in the Amazonian 'deforestation arch' is in part a consequence of soybean intensification in the Cerrado ecoregion in central Brazil. A similar process is found in central Argentina, where the best lands are converted to continuous monoculture (particularly soybean) and therefore cattle raising moves to other marginal lands, including those in important ecosystems as the Chaco (Grau *et al.*, 2005).

On the other hand, soybean exportation requires better transportations networks to reach the ports, and then the destination markets in Europe or Asia. Thus, the success of this crop is now one of the driving forces of the South American Initiative on Infrastructure (IIRSA), which includes a series of highways, railways, waterways and bridges connecting the oceanic ports with the core areas within the continent, particularly central Amazonia.

The great transformation

Soybean agriculture is a clear example of a great transformation in rural South America: local agricultural shift to monocultures oriented to agribusiness, outsourcing of traditional rural activities, strong commodification and a greater focus on the control of production processes rather than on property. Local production is delinked from local and national markets and oriented to international demand; export prices replace national prices, becoming the indicators of success and progress.

Latin American countries suffered market reforms in the 1980s and 1990s, which had a strong impact on rural life and agriculture. Trade was liberalized, support to small and medium farmers withdrawn and State agricultural agencies weakened or closed down. The result was that agriculture shifted to international trade and therefore in some competitive sectors agribusiness replaced farmers, and corporate-developed technological packages burst into many countries (such as flower production in Colombia and Ecuador or fruit processing in Chile).

Soybean is the most recent and extreme example of this trend. Soybean agriculture is much more than a response to high prices and sustained demand. It is embedded in a technological package that includes transgenic seeds that are resistant to glyphosate herbicide, and procedures that do not involve tilling. The package is presented as the result of scientific innovation and technological success in political, business and scholarly texts, which are also full of metaphors invoking prosperity and progress. It is a 'package', which means that its various components cannot be used separately, and practices such as no tilling or precision tilling are presented as necessarily linked to the use of transgenic seeds. High-tech images are found everywhere, with farmers using computers with wireless connections that permit direct real-time communication with the machinery in the field.

Thus, current agribusiness moves beyond established relations of agricultural capital: it becomes the symbol of progress, evoking images of world economic leadership and knowhow, and the sign of integration into global markets. Any criticism or warnings about negative environmental or social impacts are denounced as primitive and unscientific, as holding back economic growth and as wishing to throw these countries back into poverty.

Furthermore, soy agriculture involves an even more drastic change in land ownership and land management. Many small- and medium-size farmers, although they own their land, end up transferring everyday management to a third party. The procedures are diverse but include renting, joint production agreements and loans that require control on production. Thus, the farmer loses control of his land, which is managed by a new actor who is best described as a 'rural manager' (usually a university-trained agronomist or an MBA). Land ownership does not change, but control of the land is concentrated in a few medium to large companies, national or transnational agribusinesses, agriculture investment funds or trade brokers. Many of these companies control thousands of hectares, some operating in several countries. This allows for a reduction in operational costs, better conditions to buy seeds or fertilizers and a reduction in

sanitary and climate risk, with crops produced in many different regions. It also creates a way to cope with the economic and political constraints operating in several countries.

One of the best examples is *Los Grobo*, an Argentinean economic group. The CEO, Gustavo Grobocopatel, is known as the soy king, controlling over 170,000 ha (120,000 in Argentina and the rest in Paraguay and Uruguay), producing 2 million tons of soy and enjoying an income of US\$450 million (*Clarín*, Buenos Aires, 20 July 2008). Despite such wealth, Grobocopatel presents himself as a 'landless farmer' because of the large proportion of rented or controlled land with other farmers. Another giant, MSU, handles 121,000 ha, 50 percent devoted to soybean, mostly rented or managed, and distributed in four countries. MSU presented itself as an agriculture and logistics manager (*Fortuna*, Buenos Aires, 5 January 2008).

The classic image of poor farmers and rich ranchers is replaced by one of rural managers, most of them with university-level education, living in cities and specialized in business management. The MBAs are replacing farmers.

Control over land and agriculture processes particularly affects small- and medium-size farmers. This is because their profit margins are narrow; although soy prices increase, several inputs like energy and fertilizers also increase. They face the paradox of handling large amounts of money but with narrower margins. Therefore, if prices drop, or there are sanitary problems or climate restrictions, they will end up in debt. In this situation they will sell their land, or more commonly they will lose control of the land, signing an agreement with the new rural managers. For example, Erai Maggi Scheffer, a Brazilian soy entrepreneur, specializes in 'hunting' indebted farmers, to subsequently propose joint risk agreements by providing funds to buy seeds and fertilizers. By 2007, his company had reached agreements that covered 50,000 ha (*Dinheiro Rural*, Sao Paulo, February 2007).

The new rural managers handle thousands of hectares; they squeeze the land for its natural resources and soil fertility, and after a few years, when productivity decreases, they just move to

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other farms and new regions. Such rural management is fragmented according to the dictates of market relations. Everyday work is divided among subcontracted companies or persons. It is a rural version of outsourcing, where third-party companies sell all sorts of services, from sowing to fertilization, from harvesting to the handle of beehives. The classic role of the farmer actively involved with everyday activities on their land is lost.

Under this new rural structure, handling of natural resources such as land is important. However, the new strategies are not based on ownership of resources, but on the control and regulation of productive processes. Specific production strategies and their technological packages are imposed, as part of global economy governance (determined by institutions like CBOT or the World Trade Organization). Capital determines new production and trade procedures that engage not the owner, but the manager of the resources.

Old and new social conflicts

This radical change in rural production leaves little room for small farmers, family farming and particularly peasant communities or indigenous groups involved in agriculture. This great transformation maintains or even increases their marginalization, sentencing them to produce for national or global markets if they wish to survive.

The social, economic and environmental impacts are so acute that conflicts and protests are increasing. But once again, such conflicts are determined by new arrangements and expressions. Among them are forms of protest that bring together quite a disparate set of rural actors, such as small peasants and large traditional ranchers. The old categories of rural oligarchy and grassroots resistance movements can no longer be used to explain such alliances and behaviour. For example, a rural conflict in Argentina in early 2008 resulted from a presidential decree to increase the export tax on grains, including soybean. The small farmer national federation started rallies and protests, in alliance with the association of large traditional ranchers. While the former always defended progressive positions, demanding the protection of family agriculture,

the latter was associated with conservative economic and political positions. These two associations, plus all other major rural groups, established a strong alliance. 'We are not together because we love each other, but because we are afraid of the government', stated the president of the Small Farmers Federation.

The increase of export tax by the Argentinean government was presented as a progressive redistributive measure. Cristina Kirchner's administration, a continuation of the previous Argentinean president, Néstor Kirchner, is usually presented as one of the most progressive governments in Latin America (along with Venezuela, Brazil, Chile, Uruguay, Bolivia and Ecuador). There was an expectation that her government would have proactive agricultural policies, particularly in protecting small farmers and peasants.

The farmers' opposition to the Argentinean tax increase cannot be explained as just a reaction of the rural oligarchy. This explanation does not take into account why different civil society organizations, with strikingly different histories and political backgrounds, ended up united in opposing the so-called progressive government. These situations are illustrative of new types of social alliances, some of them unthinkable a few years ago, which are taking up the strategies of grassroots resistance groups (such as the *cacerolazos* and road blockades). Nevertheless, these groups do not discuss the core of the new agriculture strategy, because even the Argentinean federation of family farmers supports the soybean package and its universal adoption. Therefore, rural actors struggle over the appropriation of capital and how it is used (or misused by the federal government). It is a conflict about the economic surplus. Only very small farmers and peasant communities, which are outside this agribusiness strategy, contest the rationality of the new soybean packages. However, they are so tiny that they are unable to reach the same level of protest.

Likewise, old categories do not help to explain government positions. Although during the rural conflict the Kirchner government started to criticize soybean agriculture, a more rigorous evaluation shows that the highest expansion rate

of soy was during Néstor Kirchner's administration: it grew from about 31 million tons in 2003–2004 to over 47 million tons in 2006/2007 (almost a 50 percent increase). Soybean agriculture and its technological package were intensively promoted and nurtured by the government, because the corresponding export tax was one of the key sources to fund government expenditures. Furthermore, government support measures are contradictory. Compensatory payments recently started by the Argentinean government were not only small in magnitude but about 70 percent ended up going to agribusiness (with a remarkable concentration in a few companies), while only about 30 percent reached farmers. Thus, the government is also disputing economic surplus rather than the basis of its agriculture strategy.

Most progressive governments seem to be either 'disoriented' or conservative regarding rural development. Another example is the new proposal to strengthen agriculture and reduce the impact on food prices in Ecuador. President Rafael Correa proposed aid and subsidies for a total of US\$415 million, but almost 70 percent (US\$287 millions) are devoted to subsidies to agrochemicals, which not only will worsen environmental quality but also will end up only benefiting large companies.

Most governments support the great transformation with the promotion of agribusiness. There are frequent rural protests in many countries such as Peru, Ecuador, Bolivia, Paraguay and Argentina. Protests are not so strong in other countries, notably Brazil, Chile and Uruguay, because although these governments also support the agribusiness export-driven sector, they have also provided some social assistance measures to reduce farmer unrest.

Global drivers and the crisis of rural development

The rural sector in South America is undergoing a radical change, where agribusiness prevails, driven by global markets, resulting in the increasing commodification of rural life. These trends result in some macroeconomic benefits, such as an increase in exports, which is an important source

of income to sustain either the State or financial commitments (such as high interest in Brazil, and limitations on external credit in Argentina), and avoiding trade deficit.

This situation resembles Tom Wolfe's book *The Bonfire of the Vanities*, which describes the global market, controlled from Wall Street, where intermediaries and brokers make huge profits. Soybean is one of the best examples of the new conditions imposed by globalization and the commodities supercycle, where agribusiness and trade companies benefit the most. This macroeconomic welfare contrasts with the micro-impacts of the marginalization of small farmers, economic dependence and environmental degradation.

In South America, debates about exchange of goods have been replaced by discussions of prices and how to take advantage of the new trade bonanza. The dream of huge profits captures the imagination of almost all actors, from small farmers to large ranchers, from local agribusiness to large transnational companies. Even the region's progressive governments consider this as their dreamed-of opportunity.

Vanity taints the discussion around the soybean sector: academics present it as the most recent and successful scientific endeavour, entrepreneurs give lectures promoting the cyberfarmer as the new frontier in rural life, CEOs lecture on profits and politicians enjoy the putative benefits of positive trade balance. This makes the situation extremely complex because it involves not only productive features and economic and social trade-offs, but it also touches many symbolic issues deeply rooted in the social imaginary. The soybean boom reinforces the myth of South America being a continent with extensive natural resources and virgin areas, waiting to be exploited for development.

In this bonfire, small farmers, particularly peasants and indigenous groups, are marginalized and excluded. Their voices are lost in the discussion about the appropriation of the surplus. Governments may take some resources from the agribusiness sector to buffer the most negative effects of the great transition, but in the end they accept the cost as inevitable and fail to consider the possibility of structural changes. Family and

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small agriculture will continue to be shrunk and marginalized, while most of the peasant and indigenous agriculture will be trapped in a subsistence economy and poverty, depending on export opportunities, social assistance or solidarity projects (such as fair trade).

The soybean sector is at the forefront of a radical shift where global drivers are the key factors. In Wolfe's novel, the main character, Sherman McCoy proudly saw himself as one of the few 'masters of the Universe': a financial broker handling millions of dollars in the virtual markets. A similar situation is now found in the soy sector, where the 'masters' are transnational trade brokers housed in the Chicago Board and in the regional boards in Argentina and Brazil, or in the large transnational and national agribusiness companies.

Rural development is now scarcely spoken about. This situation is so dramatic that in early

2008, the new secretary of agriculture in Chile acknowledged publicly that she knows almost nothing about rural issues but that this was unimportant because only managerial skills are needed. Twenty years ago such statements would have been highly controversial, but today there is almost no public disapproval. Much is needed to counter the optimistic embrace of South American governments of the global agribusiness option and their resignation to accepting its social and environmental costs.

There is an urgent need for a rebirth of the discussion around rural development, in order to generate broader alternatives, including radical new perspectives that aim towards the recovery of farmers' autonomy, a careful delinking from global drivers and the promotion of national and regional capabilities to build up rural policies. Vanity should be replaced by humility to find a new path in rural South America.

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