

Along with the rapid expansion of ethanol production, largely manufactured from sugar cane (see page 20), South America is also beginning to play a key role as a producer of biodiesel. The main feedstock is soya and, for the soya farmers and the multinational grain companies, who were facing problems of overproduction, the new market outlet is a godsend. It gives them the perfect pretext for continuing their take-over of the continent.

Soya nexus in South America

GRAIN

“ We have 80 million hectares of land in the Amazon that is going to turn us into the Saudi Arabia of biodiesel”, said Expedito Parente, a Brazilian chemical engineer who took out the first patent for the manufacture of biodiesel on an industrial scale.¹ Brazil’s President Lula is similarly enthusiastic. “In the next 10–15 years, we will see Brazil become the leading producer of biodiesel”, he said recently.² “Few countries can compete with Brazil, because God gave us sun, land and hard-working people.”

Apart from actively promoting ethanol and biodiesel within Brazil, Lula has been seeking out investment possibilities in neighbouring countries. After a visit to Asunción in May 2007, Lula commented enthusiastically: “I’m leaving Paraguay with great optimism because the country’s potential in ethanol and biodiesel is extraordinary.” Not to be outdone, President Nicanor Duarte, of Paraguay, added: “If Brazil is to become the Saudi Arabia of biofuels, why can’t Paraguay become the Kuwait of the 21st century?”³ Lula’s desire to turn Brazil into a regional agro-energy power has the full support of Washington, which is keen to reduce South America’s dependence on oil and thus to weaken the political influence of the fiercely anti-American Venezuelan president, Hugo Chávez, who has been using his petrodollars to strengthen his influence in the region.

Biodiesel made from soya oil is the latest chapter in the conquest of South America by soya, a crop that enshrines a new form of agricultural exploitation in which the giant agro-industrial corporations

play a dominant role (*see* testimony of Norma Giarraca on page 49). Over the last four decades soya has spread like wildfire across vast areas of South America. In Brazil it began in Rio Grande do Sul, the country’s southernmost state, and has since expanded north, taking over huge areas of farming land, savannah and forest. Today it has crossed the Amazon river and is being planted in Roraima, 4,000 kilometres north of Rio Grande do Sul. The harvest, which was 1.5m tonnes in 1970, reached 57 million tonnes in 2006–7.⁴

In Argentina, the crop spread just as rapidly, moving north and west and gobbling up large areas of arable land, pampas and forest. This year the harvest totalled 43 million tonnes, compared with just 27,000 tonnes in 1970. In the early 1990s Brazilian farmers from Mato Grosso do Sul took the crop to Paraguay, where now it covers 2.5 million hectares and has become the country’s main export.

Soya means monoculture and huge mechanised farms. As a result, soya has done enormous environmental damage, causing the destruction of 21 million hectares of forest in Brazil, 14 million in Argentina and 2 million in Paraguay.⁵ At the same time, soya has pushed out food crops. From 1991 to 2005 the area in Brazil planted with rice, beans, maize and wheat decreased, while the area going to soya more than tripled. In Argentina it is the same story: production of many staples, including milk, rice, maize, potatoes and lentils, has fallen sharply.⁶



1 <http://tinyurl.com/33gauk>

2 “Brazil to be world’s leading biodiesel producer”, People’s Daily, 19 November 2005. <http://tinyurl.com/392h3g>

3 “Imperial and Exploiter: Wave of Criticism Welcomes Brazil’s Lula in Paraguay”, Brazil magazine, 22 May 2007. <http://tinyurl.com/2q3yyh>

4 <http://tinyurl.com/37mfzh>

5 Miguel Altieri and Elisabeth Bravo, “The ecological and social tragedy of crop-based biofuel production in the Americas”, April 2007. <http://tinyurl.com/3dkpto>

6 “Argentina’s Bitter Harvest”, New Scientist, 17 April 2004, p. 40.

As most staple foods are cultivated by family farmers, this means that the very fabric of rural life has been destroyed. As the soya front advanced north in Brazil, some 300,000 people were displaced from Rio Grande do Sul and another 2.5 million people from Paraná.⁷ About 150,000 families were thrown off their land in Argentina⁸ and another 90,000 families in Paraguay.⁹

There has been strong resistance from social movements all over the region, yet the march of soya is proving very difficult to stop. It has the support of some of the most powerful groups in agribusiness – ADM (the world's largest soya processor), Cargill (the world's largest grain trader), CentralSoya, Bunge, Mitsubishi and others. Over the last 30 years both ADM and Cargill have relocated their soya export base to Brazil and Argentina. Throughout this process they have lobbied hard and got the local governments to invest heavily in transport infrastructure. Roads have been built and paved, and rivers dredged, all at domestic taxpayers' expense, though very few local inhabitants benefit. More recently, some of these companies have taken the repositioning a step further. Cargill and the US-based Smithfield, both giant meat processors, have set up pig- and chicken-packing houses in the south of the Amazon basin.¹⁰ They are now exporting pork and poultry from animals fed on soya meal.

⁷ Ibid.

⁸ Ibid.

⁹ "Urgent Solidarity with Paraguayan Campesinos", *Upside Down World*, 24 May 2007. <http://tinyurl.com/2gdtz4>

¹⁰ Marcia Merry Baker, "Soy Monoculture in the Americas: Globalisation Ruins Food Economy". <http://tinyurl.com/2aw8r3>

¹¹ William Thurmond, "Biodiesel 2020: The Emerging Markets", *Swiss Derivatives Review* 32, Autumn 2006.

¹² "Biodiesel: Boom or Bust?", *ICIS News*, 5 February 2007. <http://tinyurl.com/2yyxex>

¹³ <http://tinyurl.com/ys5nbv>

¹⁴ <http://tinyurl.com/28svwd>

¹⁵ John Baize, "The Global Biodiesel Industry: A Road to Riches or an Impending Train Wreck?", <http://tinyurl.com/2apgxt>

¹⁶ "Italian Firms to Invest in Brazil Biodiesel Plants", *Platt's*, 27 March 2007. <http://tinyurl.com/ypzwt9>

and plans to become a leading regional player, once it has completed its new refinery in the port of Callao.¹⁴ Yet the scope for expansion in most South American countries is limited. Even Argentina, Latin America's second-largest country, has little land still available for soya. According to one US energy analyst, "Argentina can increase plantings of soya by 3 per cent or less because of limited land availability."¹⁵

Brazil, however, is in a different position. Despite the rapid expansion in recent years, Brazil still has a huge area, generally estimated at about 80 million hectares, that could be planted with soya (though this figure includes part of the Amazon basin). As a result, most analysts expect Brazil to overtake the USA as the world's leading soya exporter next year and by 2015 to be exporting twice as much (see graph). By then, a large part of Brazil's soya exports may consist of biodiesel.

The biodiesel boom has arisen at a very convenient moment for Brazilian soya farmers, who had begun to produce at a loss, squeezed between the low world price of soya and unsustainable costs because of the huge distances the soya had to be transported by lorries fuelled with expensive diesel. Today their problems are disappearing: export prices have risen because of the agrofuels boom and transport costs are falling because of cheap biodiesel, produced locally with vast government subsidy.

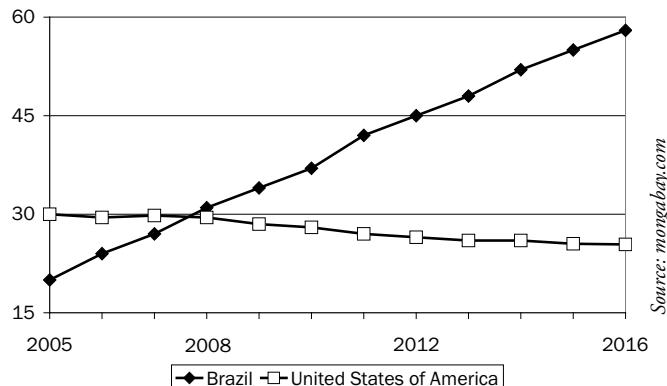
Not surprisingly, ADM is cashing in on the new opportunities. It has chosen Brazil as the centre of its South American biodiesel operations, and within Brazil it has selected Rondonópolis in the state of Mato Grosso do Sul for its biggest investment. ADM's new biodiesel refinery, the biggest in Brazil, will shortly come on stream, and its clients will include Blairo Maggi, the state governor, who is also one of the world's largest soya farmers and has long had a close association with ADM. Maggi will be selling part of his soya harvest to ADM at market price and buying back the cheap biodiesel. Pig rearers and cattle farmers will be able to buy the leftover from the biodiesel production to feed to their animals. This will also mean that it will become possible to rear cattle more intensively, thus freeing land for more soya production.

Along with ADM, a host of other corporations are investing in the sector. Italian companies are spending US\$480m to build four biodiesel refineries.¹⁶ Marubeni Corporation, Japan's fifth-largest corporation, is investing US\$40m in a joint venture with the Grupo Agreco, a large Brazilian trading company, to produce biodiesel and soya



Projected soya exports, US and Brazil, 2004–2016

(million tonnes)



Source: mongabay.com

meal. José Honório Accarini, a leading government analyst, said that the government expected investment in biodiesel to reach US\$1.5bn by 2013, by which time Brazil should be producing 2 billion litres of the fuel.¹⁷

President Lula's original plan was for most biodiesel to be produced from castor beans cultivated by impoverished small farmers in the north-east of the country. Unlike ethanol, which in Brazil is produced on big sugar plantations, he expected biodiesel to play an important role in alleviating poverty. "As it [biodiesel] can easily be produced by small farmers in some of the poorest regions of the country, the project combines environmental protection with rural development, and reduces social inequality", he enthused in an article specially written for the European press.¹⁸ Indeed, President Lula introduced tax breaks for refineries purchasing from small-holders, and confidently predicted that by the end of 2007 some 350,000 people would be working in the biodiesel industry.

However, even though some small farmers have enrolled in the programme, it is already clear that they will not be the dominant producers. "If this project is to succeed, it will likely need the scale that only the soya industry can bring", said Carlo Lovatelli, head of Abiove (the Brazilian Oilseed Processors' Association), in 2005.¹⁹ Since then, the grip of the soya farmers on the industry has become ever tighter. Several global analysts expect Brazil to become the dominant exporter by 2020, with China the leading consumer.²⁰

This means that, unless the Brazilian government takes decisive action to prevent it, soya is likely to take over most of the Amazon basin over the next decade. Within just a few years the relentless advance of the agricultural frontier into the Amazon basin is likely to push the tropical forest over the

critical "tipping point" so that it starts to dry out and turn into savannah. Then, indeed, there will be no stopping the farmers, who will see no reason at all for not making economic use of the moribund forest. As the forest dies, hundreds of thousands of river dwellers, peasant families and indigenous people will be disinherited, and the world will lose an extraordinary biomass, which plays a key role in regulating the global climate. Just as serious, the destruction of the Amazon forest will release some 90 billion tonnes of carbon into the atmosphere, enough by itself to increase the rate of global warming by 50 per cent.²¹

What makes the biodiesel craze particularly senseless is that very little at all will be achieved in return for this colossal damage to the planet and its people. Despite the current investment boom, biodiesel will never be able to satisfy more than a fraction of global diesel demand. At the moment, the USA consumes each year some 60 billion gallons of diesel fuel. Even with all the investment, global biodiesel production will only reach one fifth of this – 12 billion gallons – by 2010, and much of this will not be available to the USA.²² One analyst put it very bluntly: "the impact on global diesel supply will be minimal".²³

Moreover, the small contribution that biodiesel will make towards solving the global energy crisis will be short-lived. The present stampede will very quickly exhaust the supply of land, with the destruction of many of the planet's remaining ecosystems (including tropical forests). William Thurmond, author of "Biodiesel 2020: a Global Market View", put it clearly: By 2015, "energy demands for soybeans, canola and jatropha oil [will] surpass the available land to plant these energy-rich crops."²⁴ Leaving a wake of destruction behind it, the global energy industry will then seek another "technical fix", and another source of profits.

17 "Brazil's fledgling biodiesel industry takes off", Environment News Service, 29 April 2005.
<http://tinyurl.com/yv3bt7>

18 Luiz Inácio Lula da Silva, "Join Brazil in Planting Oil", Guardian, 7 March 2006.
<http://tinyurl.com/25rrnu>

19 "Brazil's biodiesel rush", Biodiesel, August–September 2005.
<http://tinyurl.com/2tr9rk>

20 "Watch Brazil and China, says new biodiesel study", Inside Greentech, 30 January 2007.
<http://tinyurl.com/3dbzlg>

21 "Amazon Forest 'could become a desert'", Independent, 23 July 2006.
<http://tinyurl.com/rbo3c>

22 Online Business Intelligence for the BioPharma Industry, "Biofuel Market Worldwide (2006)".
<http://tinyurl.com/2o5nm6>

23 John Baize, "Biodiesel: The Solution or a Disaster?"
<http://tinyurl.com/28szqw>

24 William Thurmond, "Biodiesel 2020: The Emerging Markets", Swiss Derivatives Review 32, Autumn 2006.

