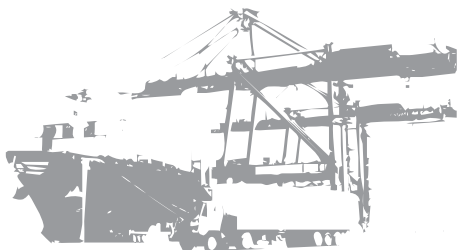




Soy Trade in Uruguay



Soy Trade in **Uruguay**



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SOY TRADE IN URUGUAY

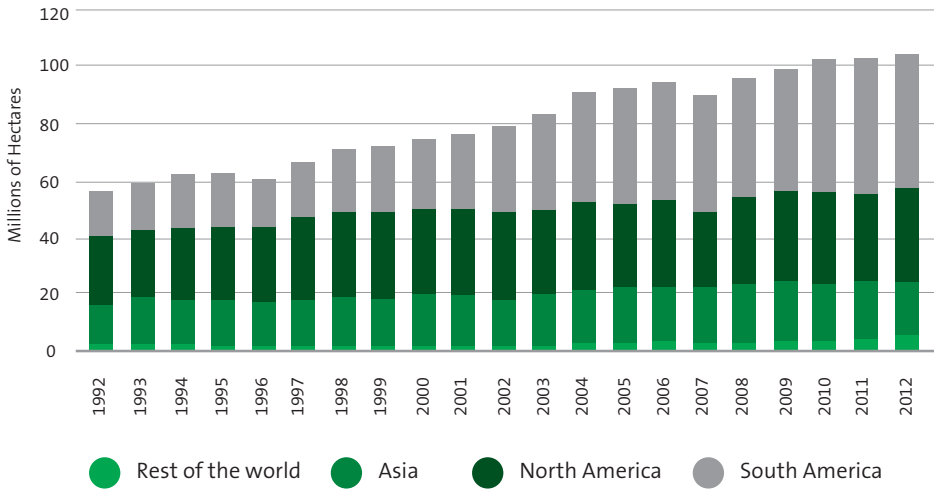
Soy production has increased dramatically in Uruguay in the past twelve years, going from covering less than 50 thousand hectares to covering over 1 million hectares. Soy exports have become the main source of income in the country, exceeding bovine meat, the traditional Uruguayan export activity. The clearly exporting profile of the soy business, concentration in the hands of a few business actors, the high dependence on imported input, the practically non-existent industrialization and the low taxes are elements to be integrated in the analysis about the real benefits of soy trade for the Uruguayan society.

SOY TRADE AT GLOBAL LEVEL

Global soy production

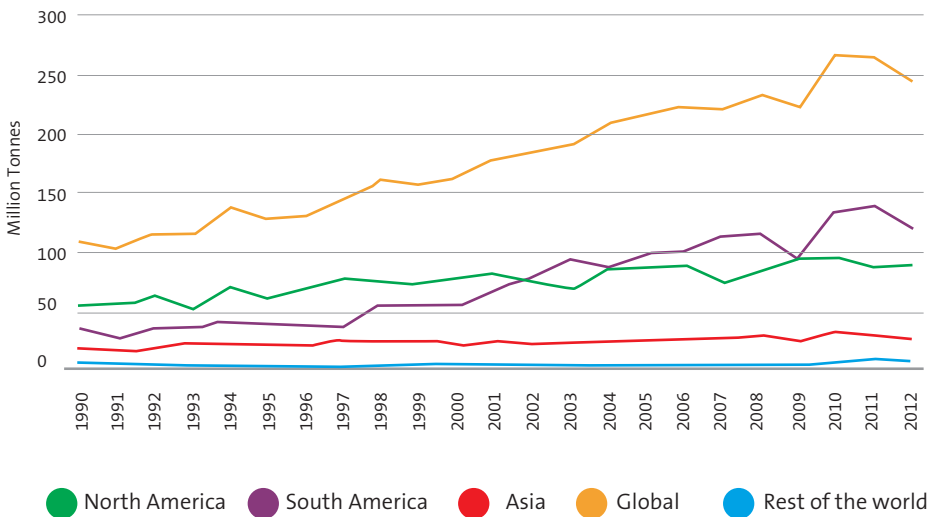
The rising demand of soy beans by the Chinese market has triggered the global growth of this crop, which in 20 years (from 1992 to 2012) went from covering 56 million to covering 105 million hectares (See Graph 1). The crop has grown the most in the Southern Cone region (Argentina, Brazil, Paraguay, Uruguay and Bolivia). In 1992, there were 15.1 million hectares planted with soy in this region, amounting to 27% of the global area, while in 2012, this area increased over three-fold, reaching 47.8 million hectares (46% of the global area cultivated with soy). The US, the main producer of soy at world level, increased its area planted with soy by 30%, going from sowing 23.6 million hectares (42% of the total area) to 30.8 million hectares (29% of the total area). Asia, the continent that currently demands more soy in the world, increased its soy area in these past 20 years by 40%, going from 13.9 to 19.4 million hectares (18% of the area at world level)¹. Global soy production went from 109 million tonnes to 242 million tonnes between 1992 and 2012 (See Graph 2). Two thirds of this increase corresponded to the rise in production experienced in the Southern Cone, which amounted to 87.3 million tonnes in that period. By 2012, the US continued being the world's largest soy producer with 82 million tonnes, followed by Brazil and Argentina with 66 and 40 million tonnes respectively. Together, the Southern Cone produced 120 million tonnes of soy in 2012. Production in Asia increased by 10 million tonnes, going from 17 million in 1992 to 27 million in 2012. By 2012, China was the largest producer in that continent with 12.8 million tonnes, followed by India with 11.5 million; both countries account for 90% of soy production in Asia. It is worth mentioning that while China has not significantly increased its soy production in these 20 years (less than 25%), India increased its production 3.7 times, which meant producing 8.1 million tonnes more than 20 years ago¹.

>>> Area of soy at world level



Graph 1. Evolution of soy area at world level between 1992 and 2012 Based on FAOSTAT²

>>> Global soy production

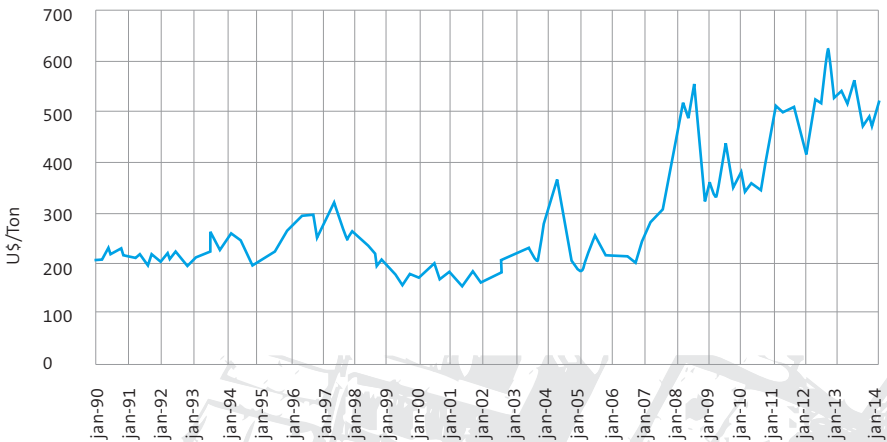


Graph 2. Evolution of soy at world level between 1990 and 2012 Based on FAOSTAT²

THE GLOBAL MARKET OF SOY

Invigorated by the Chinese demand and the increase of production in Southern Cone countries, the international soy market has experienced a large expansion. World exports of soybeans in 2012 amounted to 92.3 million tonnes and US\$ 53 billion^{3,4}. Twenty years ago, soy export volumes were three times smaller (29 million tonnes) and mobilized eight times less capital (US\$ 6.41 billion) ⁵. This can be explained with the rise of the international price of this commodity, whose price in futures markets (Chicago Stock Exchange) was almost US\$ 225 /Ton in 1992 and amounted to US\$ 623/Ton in August 2012 (see Graph 3)⁶.

>>> Price of soy in the Chicago Stock Exchange



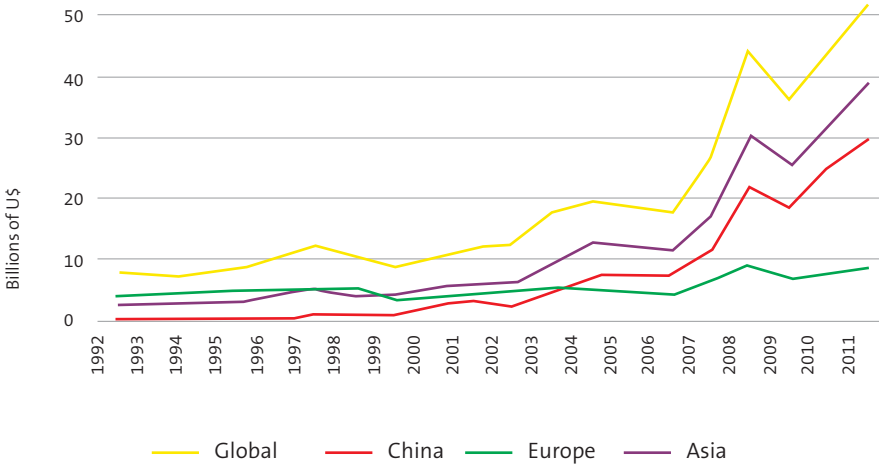
Graph 3. Monthly variation of the price of soy at the Chicago Stock Exchange. Based on IMF-Export Price⁶.

Cme
Chicago Mercantile Exchange

The main exporter of soy in 2012 was the US, followed by Brazil and Argentina. While the US exported 37.2 million tonnes at US\$ 24,742 million, the Southern Cone countries exported together 49.9 million tonnes at US\$ 23,413 million. Table 1 shows data of the six main exporters.

In 2012, soy importer countries at world level purchased 93.5 million tonnes at US\$ 57 billion, and China was responsible for 63% of these imports. Spain, Germany and the Netherlands were the main European importers, accounting for purchases worth US\$ 5.2 billion, representing 9% of the total^{7,8}. Since 1992, imports grew by 63.5 million tonnes, and China was responsible for over 90% of this increase. Until 1996, China did not make significant purchases of soy at the international market, but from that year on, the country started to increase its purchasing volumes, becoming a strong driver of the soy market (see Graph 4). Table 1 shows data of the six main importers.

>>> Soy Imports



Graph 4. Evolution of soy imports in billions of US\$. Data for China, Asia (including China), Europe and global level are presented. Based on FAOSTAT.

Table 1. Main soy exporters and importers

| EXPORTERS | 1992 | | | 2012 | | |
|--------------|----------------------|------------|----------------------|----------------------|------------|----------------------|
| | Ton* 10 ⁶ | %Part | U\$* 10 ⁶ | Ton* 10 ⁶ | %Part | U\$* 10 ⁶ |
| US | 19.9 | 68 | 4417 | 37.2 | 40,5 | 24742 |
| Brazil | 3.7 | 13 | 809 | 36.3 | 39 | 17248 |
| Argentina | 3.1 | 11 | 655 | 7.4 | 8 | 3192 |
| Paraguay | 0.9 | 3 | 137 | 3.6 | 4 | 1577 |
| Canadá | 0.2 | 1 | 61 | 2.9 | 3 | 2171 |
| Uruguay | - | - | - | 2.6 | 3 | 1396 |
| Others | 1.3 | 4 | 331 | 2.3 | 2,5 | 2857 |
| <i>Total</i> | <i>29.1</i> | <i>100</i> | <i>6410</i> | <i>92.3</i> | <i>100</i> | <i>53183</i> |

| IMPORTERS | 1992 | | | 2012 | | |
|--------------|----------------------|------------|----------------------|----------------------|------------|----------------------|
| | Ton* 10 ⁶ | %Part | U\$* 10 ⁶ | Ton* 10 ⁶ | %Part | U\$* 10 ⁶ |
| China | 0.1 | 0,5 | 29 | 59.2 | 63 | 34942 |
| Mexico | 2.1 | 7 | 512 | 3.6 | 4 | 973 |
| Germany | 3.2 | 11 | 768 | 3.2 | 3,5 | 1877 |
| Spain | 2.6 | 8,5 | 606 | 3.2 | 3,5 | 1909 |
| Netherlands | 4.3 | 14,5 | 1029 | 2.3 | 2,5 | 1422 |
| Japan | 4.7 | 15,5 | 1238 | 2.8 | 3 | 1811 |
| Others | 12.9 | 43 | 3214 | 19.1 | 20,5 | 14485 |
| <i>Total</i> | <i>29.9</i> | <i>100</i> | <i>7396</i> | <i>93.4</i> | <i>100</i> | <i>57419</i> |

1992 and 2012 data shown. % of participation of each country in world exports and imports is estimated based on soy volume in tonnes. Based on FAOSTAT, USDA Foreign Agriculture Service and Instituto Uruguay XXI.

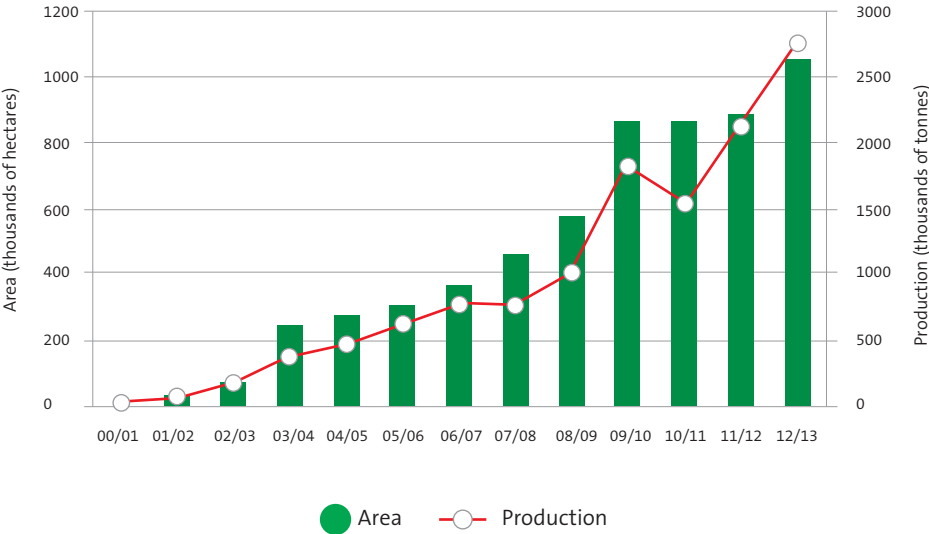


SOY PRODUCTION IN URUGUAY



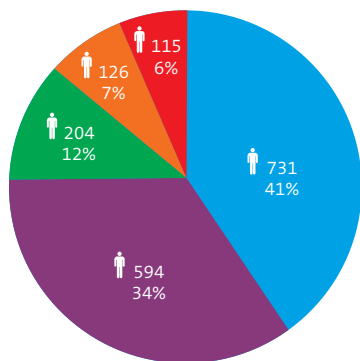
Up until 12 years ago, soy was not a relevant crop for Uruguayan agriculture. The seasons where over 50 thousand hectares were planted with soy were unusual. In the past decade, the crop entered an expansion process where the area and production of soy was multiplied over 100 times from 2000/01 to 2012/13. In this period, the area planted with soy went from 12 thousand hectares to over 1 million hectares, and its production from 28 thousand tonnes to 2.8 million tonnes ^{9,10} (Graph 5). Currently, soy is the main agricultural crop in the country, covering over 85% of the summer agricultural crops area. Its production is concentrated in the hands of large-scale producers. In the 2012/13 season, the producers that planted over 2000 hectares (around 115 companies) represented 6% of all producers and concentrated 60% of soy production in Uruguay ¹¹ (Graph 6).

>>> Evolution of the area and production of soy in Uruguay



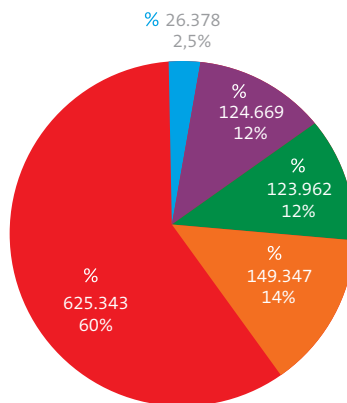
Graph 5. Evolution of area and production of soy between the 2000/01 and 2012/13 seasons Based on data by DIEA-MGAP.

Number of producers



● ≤ 100ha ● 101 a 500 ha
● 501 a 1000 ha ● 1001 a 2000 ha

Area



● ≤ 100ha ● 101 a 500 ha
● 501 a 1000 ha ● 1001 a 2000 ha

Graph 6. Number of soy producers and area planted (in hectares) according to production scale in the 2012/2013 season. Numerical and percentage data are shown. As a way of example, the soy producers who planted an area smaller or equal to 100 hectares were 731 (41% of the total) covering together an area of 26,378 hectares, which represented 2.5% of the total area of soy sowed in the 2012/2013 season. Based on data of DIEA-MGAP, Winter Agricultural Survey, 2013.

"NEW" FARMERS

The main actors behind the development of the crop are large companies that started operating in Uruguay in the past decade. These "new farmers" according to the typology proposed by Arbeletche and Carballo¹², are agricultural companies that share some features: they manage large extensions of agricultural lands, mainly leased lands; they channel investment funds to the agricultural sector; production is managed by a team of professionals; they hire services by third parties in the production stage and many of them operate in futures markets. These types of companies are generally present in several countries of the region and arrive to Uruguay attracted by tax benefits, lower prices of lands when compared to the Pampa region in Argentina and the southern region of Brazil and the available infrastructure (silos, roads, ports, etc.)¹³

Among these companies we can highlight the Union Agriculture Group (UAG) which started its operations in 2008 after the initiative of Uruguayan businessmen who captured investment funds mainly from North America and Europe for the acquisition of lands. Currently, it has over 400 shareholders, among them Pension Funds and Insurance Companies from the US, Canada and Europe. This company focuses on different production activities including bovine and ovine cattle raising, milk production, rice, wheat and soy¹⁴. Contrary to other companies of this type, UAG strongly invests in the purchase of lands, managing very few lands through leases. UAG promises its investors profits that amount to 3 and 4% due to operational profitability (land exploitation) and between 6 and 7% due to land value appreciation¹⁵. This implies that the higher expectation of profit is based on the rise of the price of land in the next years. In early 2014, UAG acquired the Tafilar company, a Uruguayan subsidiary of the Argentinean sowing pool El Tejar. This company was the largest soy producer in Uruguay since its arrival in 2003 up until last season.

At the time of the operation, Tafilar managed 67,000 hectares in Uruguay (32,000 owned and 35,000 leased) after reducing the agricultural area handled (130,000 hectares) during 2013¹⁶. With this purchase, that amounted to 200 million dollars, UAG started to manage a land portfolio of 170,000 hectares (over 1% of agricultural lands in the country) becoming the largest agricultural company in Uruguay¹⁷ UAG harvested 13,730 hectares of soy during the 2012/2013 season, while Tafilar was responsible for over 80,000 hectares.¹⁸

Another relevant actor in the production stage of soy agribusiness is the Agronegocios del Plata company (ADP), an association between the Argentinean group Los Grobo with Uruguayan businessman Marcos Guigou. The media refers to Gustavo Grobocopatel, CEO of Los Grobo Group, as the King of Soy due to how he has promoted this crop in the countries of the region, specifically Argentina, Brazil, Paraguay and Uruguay, with plans to develop the crop in Colombia. The group's turn over in 2013 was 900 million dollars, but this income didn't come only from primary production, but from the flour industry and the sale of inputs and services, including financial services¹⁹ In Uruguay, in addition to focusing on agriculture, ADP commercializes inputs and exports grains. In the 2012/2013 season, ADP sowed 47,000 hectares of soy in Uruguay²⁰ Other relevant companies in the production stage that handle large areas of agriculture in Uruguay are: Villa Trigo SA, owned by Uruguayan group Erro (one of the most important groups in grain storage and export of the country) with around 60,000 hectares; MSU (Manuel Santos de Uribelarrea), an Argentinean company present in several countries of the region with 55,000 hectares; Garmet (Perez Companc Group of Argentina) with 45,000 hectares; AdecoAgro, Argentinean company with George Soros capital, with 45,000 hectares; Kilafen, Argentinean company with 25,000 hectares and Cosechas del Uruguay, of Argentina, with 20,000 hectares²¹. All these companies sow over 10,000 hectares of soy per season.

TECHNOLOGY PACKAGE ASSOCIATED TO THE PRODUCTION OF SOY

GM seeds, herbicides and no-till farming

The use of glyphosate-tolerant GM seeds, the use of this herbicide and the generalization of the use of no-till farming allowed for the development of a technology package associated to the cultivation of soy, which together with the high international prices of the grain, made its large-scale production highly profitable. Supported by the sophistication of modern biotechnology, a production modality has been promoted that implies a setback in terms of the management and conservation of agroecosystems. The expansion of soy has been featured by an intensification in the use of agricultural lands, a higher use of herbicides, the abandonment of agricultural rotation systems, the implementation of continuous agriculture systems and the establishment of agricultural crops in areas less apt for agriculture and with a higher risk of erosion.²²

Currently, nearly 100% of the area cultivated with soy is planted with GM soy. The authorized GM crops are GTS 40-3-2, commercially known as RR Soy (Roundup Ready) and MON89788xMON87701 whose commercial name is Intacta RR2 PRO, both of Monsanto. This crop was sowed in Uruguay for the first time during the 2013/2014 season. Both crops are tolerant to glyphosate herbicide. In addition, Intact RR2 PRO soy produces a bacterial toxin that makes it resistant to the larvae of hundreds of Lepidoptera. There are applications for the authorization of the commercial release of new GM soy crops, which are tolerant to other herbicides (Dicamba, Imidazolinones, 2,4-D and glufosinate ammonium). Some of these GM soys are tolerant to more than one herbicide, which makes them ideal to be used with herbicide cocktails that are already used in the production of soy due to the appearance of glyphosate-tolerant weeds. The companies that requested the commercial release of these types of GM soy are Monsanto, Dow Agrosiences and BASF.



In 2012, Uruguay imported 15,400 tonnes of GM soy seeds at US\$ 14.1 million dollars²³. 95% of these seeds came from Argentina²⁴. According to the National Seeds Institute, 97,600 tonnes of soy seeds were used that year in Uruguay, and therefore, only 15% of the seeds were imported. Of the other 85% of seeds produced in the country, over half of them (49,200 tonnes) were kept by the producers from the previous harvest for their own use²⁵. To use their own seeds, farmers pay around US\$ 100 / Ton in royalties²⁶ which amounts to US\$ 5 million for 2012. Urupov is the association of companies in charge of collecting these royalties from producers in Uruguay. Through a clause included in the seed purchase contract, producers make an agreement with the seed companies in which they commit themselves to pay a "technology compensation". After harvest, producers then pay Urupov for the seeds they keep to sow again.²⁷

Increase in the use of agrottoxics.

In the period from the year 2000 to 2012, glyphosate imports grew by 7.6 fold going from 1500 tonnes to 11500. 2,4-D herbicide imports have also increased significantly in this period, growing 8.6 times due to the fact that glyphosate is used during the fallow season after harvesting soy to eliminate glyphosate-tolerant weeds. By 2000, before the boom of soy, the ratio of imported glyphosate liters / hectares under agriculture in Uruguay was 2.8, by 2012, this ratio was 5.8.

Imports of insecticides mainly used in the cultivation of soy have also increased significantly, showing a higher intensity in their use when compared to the period before the soy boom. Endosulfan was widely used until 2008, but with the use restrictions imposed by the MGAP after 2007 and its subsequent ban by a presidential decree in 2011 (due to the fact that it was declared a Persistent Organic Pollutant), it was discontinued. This insecticide, used to control soy bugs, started to be replaced with neonicotinoids and pyrethroids such as Thiametoxan and lambda Cyhalothrin. In order to control the insects that affect soy, Chlorpyrifos is mainly used, but from 2006 on, this non selective insecticide started to be replaced with growth-regulating insecticides (Triflumuron, Metoxifenocide, Diflubenzuron, etc) which are more efficient to control these insects. However, from 2007/08 on, the consumption of Chlorpyrifos increased again due to the presence of new pests in soy, such as red spiders and locusts. Table 2 shows data about import variations for these agrottoxics. It is to be highlighted that the agrottoxics used in the Uruguayan agricultural sector are all imported whether as formulated products or as raw materials to be formulated in the country. The countries from which most of these imports come are China, with 36% of imports in US dollars, Argentina with 31%, Brazil with 15% and the US with 9% in 2012²⁸. By 2000, Uruguay imported 3,800 tonnes of agrottoxics (as active substances) amounting to US\$ 29 million, which represented 6% of the agricultural Net Production Value (NPV); in 2012 these imports amounted to 19,000 tonnes at US\$ 174 million (also 6% of the agricultural NPV for that year).

Table 2. Tonnes of active substances imported in 2000 and 2012 and their variation indexes

| ACTIVE PRINCIPLE | 2000 | 2012 | 2012/2000 | |
|--|------|-------|-----------|---|
| HERBICIDES | | | | |
| Glyphosate | 1507 | 11500 | 7.6 |  |
| 2,4 D | 145 | 1248 | 8.6 | |
| INSECTICIDES | | | | |
| Chlorpyrifos | 31.9 | 587 | 18 |  |
| Growth regulators | 1.0 | 79 | 80 | |
| Imidacloprid/Thiametoxam/lambda Cialotrina | 1.1 | 166 | 151 | |

Based on data by MGAP-DGSA²⁹.

In terms of the use of fertilizers, imports of formulations and raw materials for their formulation went from 296 thousand to 958 thousand tonnes between 2000 and 2012³⁰, amounting to U\$ 41 million and U\$ 427 million respectively. These imports amount to 8.5% of the agricultural NVP in 2000 and 14% in 2012. The increase in the use of fertilizers, especially phosphates, has had a strong impact in the processes of eutrofization of superficial freshwater. The most well-known case is that of the Santa Lucia River Basin, but these processes are present in all hydrographic basins of the country.

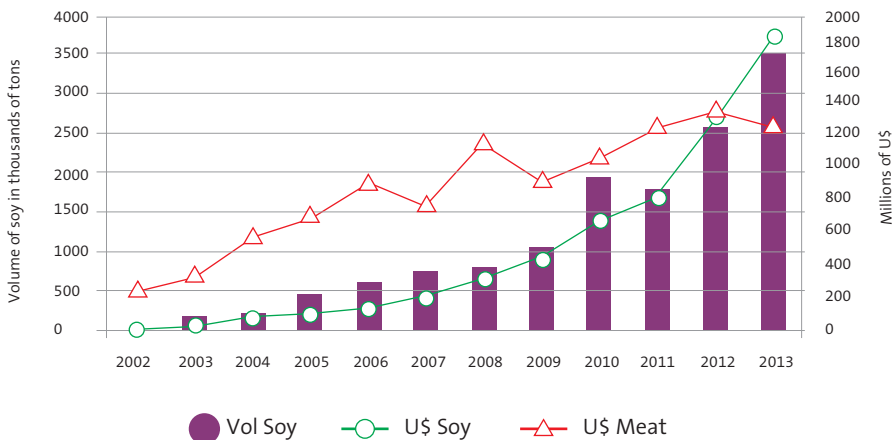


DESTINATION OF SOY PRODUCTION

Soy as the main export activity of the country

The development of soy agribusiness in Uruguay has been mainly promoted by business actors that at regional level have taken advantage of an extremely favorable global context for trading soy, given the recent demand and the excellent price level, which currently amounts to around U\$ 500/Ton. As a consequence, soy production in Uruguay has been destined exclusively to the international market. Currently, soy is the main export activity and Uruguay has become the sixth soy exporter at world level. With a volume of 3.5 million tonnes and U\$ 1875 million, soy represented 19% of exports in the country in 2013³¹. Historically, the main export activity in Uruguay was bovine meat, but in 2013, frozen and fresh meat exports added up to U\$ 1.3 billion, over U\$ 500 million below soy exports (see Graph 7). The proportion of soy in the total goods exported went from 0.5% in 2002 to %19 in 2013³².

>>> Evolution of soy and bovine meat exports



Graph 7. Evolution of soy and bovine meat exports between 2002 and 2013. The bar chart shows the evolution of the volume of soy exported in thousands of tonnes. Line Charts show the evolution of soy and bovine meat exports (Fresh and Frozen Meat) in US\$ millions. Based on data by DIEA-MGAP, Statistical Yearbooks 2007 and 2013.

The main destinations of Uruguayan soy exports in 2012 were China with 72% of the exported volume and Europe (Germany, the Netherlands and Italy) with 11%. Other targets were Tunisia, Bangladesh, Egypt and Brazil (See Table 3)^{18,20}. In their markets, soy is used mainly for monogastric animal feed (swine and poultry).

Table 3. Destination of uruguayan soy exports in 2012

| DESTINATION | THOUSANDS OF TONNES | MILLION OF US\$ | % |
|-----------------|---------------------|-----------------|----|
| China | 1.867 | 988 | 72 |
| Germany | 216 | 116 | 8 |
| Brazil | 112 | 60 | 4 |
| Bangladesh | 94 | 50 | 4 |
| Egypt | 83 | 47 | 3 |
| The Netherlands | 61 | 32 | 2 |
| Tunisia | 47 | 25 | 2 |
| Italy | 16 | 9 | 1 |
| Others | 104 | 69 | 4 |
| Total | 2.599 | 1.397 | |

For each target country, the table shows the exported volume in thousands of tonnes and the price in millions of US\$ dollars. The percentage of participation of each country is calculated based on the volume in tonnes. Based on data by Instituto Uruguay XXI^{18,20}.

EXPORTS FROM FREE TRADE ZONES

In 2012, 32% of exported Uruguayan soy was commercialized through the Free Trade Zone of Nueva Palmira. That year, 2.2 million tonnes of soy were exported from that Free Trade Zone coming from Uruguay, Paraguay and Bolivia³³.

Free Trade Zones were created as part of a set of policies that aim to attract foreign investment to the country. Among them, the Investment Promotion and Protection Law, Free Port and Free Airport regimes, Public-Private Participation Law, Industrial Parks Law, among others. These policies try to attract transnational capital by providing tax and regulatory benefits, the State acting in most cases as the guarantor of the compliance of benefits offered to companies. These policies are particularly attractive for companies that operate at global level, whether providing services or producing goods.

The Law regulating the Free Trade Zones system is Law 15.921³⁴. This law was passed on December 17, 1987, right after the military dictatorship, at the peak

of neoliberalism in the region and with the urgent need by the State to generate work sources due to the standstill of the Uruguayan economy at that time.

Precisely, Free Trade Zones are customs exclaves, i.e. they are industrial and service areas that even though they are located inside Uruguayan territory, they are considered as being outside the customs territory of the country: *"Free trade zones allow for all types of trade, industrial or services activities, with no restrictions and entitled to an exemption of all national taxes, whether existent or to be created in the future, except for the case of contributions to social security made in the name of Uruguayan employees. The entry of goods into the free trade zone areas is also exempt from all taxes. The Uruguayan State guarantees, by law, the rights that the law on free trade zones has determined for users and shall be liable for all damages to users"*³⁵.

From the point of view of customs in Uruguay, goods and raw materials that enter Free Trade Zones from Uruguay are considered exports and those that leave Free Trade Zones to enter Uruguayan territory are considered imports, and thus, they pay the corresponding customs duties, but are exempted from any other tax. But all types of exchanges of Free Trade Zones with the rest of the world do not pay any tax in Uruguay.

In addition to the tax benefits provided to users, the regulation in force provides other legal "benefits" to the companies that use the system:

"The companies entitled to perform activities at free trade zones may be natural or legal persons incorporated in any type of partnership, even companies with bearer shares, a fact that preserves the anonymity of investors. No differences are considered between national and foreign investments, and no special requirements apply to the latter, where foreign companies are allowed to establish branches. Of the hired personnel, 25% – or more, in specific cases to be considered by the Government – may be composed by foreign citizens who are allowed to choose not to make contributions to the Uruguayan social security system".

Free Trade Zones can be administered and managed by the State or private parties with the State's authorization. Currently, there are 12 Free Trade Zones in Uruguay, of which only one (Nueva Palmira Free Trade Zone) is managed by the State³⁶. As a way of example, there are two large cellulose production plants protected in this Free Trade Zone regime (UPM and Montes del Plata) which take advantage of the environmental and geographical benefits provided by the country for forestry production and access to rivers, developing a tax-free industrial activity. These plants are among the largest in the world and are located in strategic geographic areas on the shores of the Uruguay River and Rio de la Plata.

The Nueva Palmira Free Trade Zone, the only one that is managed by the State, is located next to the Nueva Palmira port, close to the estuary of the Uruguay River in Rio de la Plata facing the Parana River estuary, a strategic point for the waterway formed by the Paraguay-Parana Rivers that leads to the sea. Over 90% of soy production in Uruguay exits through this port.

Here there are companies focused on grain storage coming from Uruguay, Paraguay and Bolivia and on transferring grain from the barges that come from the Paraguay-Parana waterway to larger grain tankers. Terminales Graneleras del Uruguay (TGU) and Corporación Navíos are the companies that manage the two grain port terminals in this Free Trade Zone. A third terminal, Ontur, is mainly focused on reshipping cellulose from the Fray Bentos Free Trade Zone where the UPM plant is located up-river on the Uruguay River.

In 2012, 821 thousand tonnes of soy out of 2.6 million tonnes exported from Uruguay left the country through the Nueva Palmira Free Trade Zone towards their final destinations³⁷ This implies that storage operations for 32% of the soy exported through Uruguay that year did not contribute the State with any resource in terms of taxes. The companies that use this modality to export their grains are the ones that dominate the soy agribusiness in its production, storage and export stages.

EXPORTERS IN THE URUGUAYAN MARKET

Just like in the production stage, the storage and commercialization stage of the soy agribusiness is strongly concentrated. In 2012, ten companies were responsible for 86% of soy exports ³⁸(see Table 4). All these companies carry out part of their exports through the Nueva Palmira Free Trade Zone.

Table 4. Main soy exporter companies in 2012

| COMPANY | SALES IN U\$*10⁶ | % PROPORTION |
|-----------------|------------------------------------|---------------------|
| Crop Uruguay | 237 | 17 |
| Barraca Erro | 209 | 15 |
| Cereoil Uruguay | 193 | 14 |
| LDC Uruguay | 130 | 9 |
| Garmet | 114 | 8 |
| Tafilar | 87 | 6 |
| Kilafen | 72 | 5 |
| ADM Uruguay | 66 | 5 |
| COPAGRAN | 50 | 4 |
| ADP | 46 | 3 |
| Otrhers | 193 | 14 |
| <i>Total</i> | <i>1.397</i> | <i>100</i> |

The table shows the exported amount in million U\$ dollars for each company. The proportion percentage for each company in exports is calculated based on amount in U\$. Based on data by Instituto Uruguay XXI.

Large transnational corporations such as US Cargill (Crop Uruguay) and Archer Daniels Midland (ADM) and European Louis Dreyfus (LDC) operate in all Southern Cone countries around input supply and grain storage and commercialization. These three companies have an important participation in Uruguay and have made investments to increase their grain storage capacity in the country. The grain storage capacity increased by 56% between 2004 and 2013, going from 3.8 to 5.9 million tonnes. However, the annual grain production in that period went from 1.1 to 7 million tonnes, and thus this is a key sector of agribusiness, where large companies with investment capacity play an extremely important role³⁹. Another strong area of these companies is their financial capacity and their international business networks ("global players") which give them great competitive advantage when trading commodities, such as soy, in the international market.

Cargill started operating in Uruguay in 2005 through Crop Uruguay, in partnership with the Uruguayan group Johnson-Viana, which sold its shares and stopped being part of this company in 2009 to create Cereoil. Crop Uruguay has a storage capacity of 165,000 tonnes between their own and leased facilities, and they plan to build a plant with a capacity to store 42,000 tonnes in Nueva Palmira⁴⁰. In 2012, they were the largest Uruguayan soy exporter company, covering 17% of sales amounting to U\$ 237 million.

The Louis Dreyfus Group operates in Uruguay since 2002. They trade grains and derivatives, in addition to biodiesel, milk and fertilizers⁴¹. They have their own storage plant with capacity for 15,000 tonnes, but through agreements with third parties, they offer their customers a total storage capacity of 200,000 tonnes⁴². In 2012, they exported soy from Uruguay at U\$ 130 million, becoming the fourth company in this sector.

ADM established itself in the Uruguayan soy business in 2008. They are building a new port terminal in Nueva Palmira that will focus exclusively on the transfer of grains coming from Paraguay, Bolivia and the south of Brazil through the Paraguay-Parana waterway from barges to grain tankers. This company, that has investments in all countries of the region, owns two shipping companies in Paraguay: Naviera Chaco and America Fluvial⁴³. With their barges and towboats they are leaders in the water transport of grains in the Paraguay-Parana waterway. In addition to the silos to be installed at the Nueva Palmira terminal with a storage capacity of 180,000 tonnes, ADM has their own silos in Palmitas municipality, with a storage capacity of 36,000 tonnes⁴⁴. In 2012, soy sales of this company to other countries added up to U\$ 66 million.

Among the main exporter companies, we can find three Uruguayan corporations: Barraca Erro, Cereoil and COPAGRAN. Barraca Erro is one of the most important companies in the Uruguayan soy agribusiness. They are involved in all stages, from input supply to the export of grains. In addition to producing animal feed and soy oil, this company is the second exporter of soybeans. They have a storage capacity of 180,000 tonnes, between their own silos and agreements with third parties, and they are one of the shareholders of TGU in Nueva Palmira Free Trade Zone⁴⁵. In 2012, their soy exports amounted to U\$ 209 million.

Cereoil is owned by the Uruguayan group Johnson - Viana. In 2009, this group sold their involvement in Crop Uruguay to Cargill, a company with which they established a partnership in 2005 to create Crop Uruguay. This company, in addition to commercializing grains, is the main exporter of wheat flour. Their grain storage capacity is of 180,000 tonnes approximately⁴⁶. This company plans to install by the Uruguay River the first large-scale soy processing plant in the country to produce oil, with a capacity to process 1 million tonnes of soy. The investment would amount to 150 million dollars and would include a dock to load oil, grains and other products⁴⁷. Cereoil was the third soy exporter in 2012, commercializing U\$ 193 million.

COPAGRAN is a cooperative created in 2005 with the merger of 11 cooperatives and promotion partnerships of the Uruguay River coast. They have approximately 1,000 associated farmers. Through an agreement with the government, they were given the management of silos with a storage capacity of 205,000 tonnes. In addition to trading grains, this cooperative produces animal feed and co-owns BIOGRAN, a company that produces biodiesel from soy oil.

The other four main exporters are Argentinian companies that also operate in the production stage of the soy agrbusiness. Tafilar, as mentioned above, was recently acquired by the UAG group. Garmet, in addition to the grain business, holds investments in the meat processing industry; this company exported soy at U\$ 114 million in 2012. ADP has a storage capacity of 75,000 tonnes of grains and a large part of their business in Uruguay is focused on offering grain trading services⁴⁸. In 2012, ADP exported soy at U\$ 46 million.

In 2012, Kilafen established in Florida department a silo plant with a storage capacity of 25,000 tonnes that will be expanded to 50,000 tonnes in a second stage of the project⁴⁹. This is added to the 65,000 tonnes of the silos of the company in Nueva Palmira. In addition to commercialize and produce grains, this company commercializes liquid fertilizers⁵⁰. In 2012, their soy exports amounted to U\$ 72 million.

FROM THE FIELD TO THE SHIP

Exports without added value

Basically all soy produced in Uruguay is exported as a grain. Industrialization is quite low and Uruguay is an exception with reference to the other countries that export soy. While countries such as the US, Brazil, Argentina and Paraguay export soy pellets for animal feed and soy oil, Uruguay imports these products. In 2012, Argentina industrialized 90% of its production⁵¹, while Uruguay processed around 6% of its production⁵² (see Table 5).

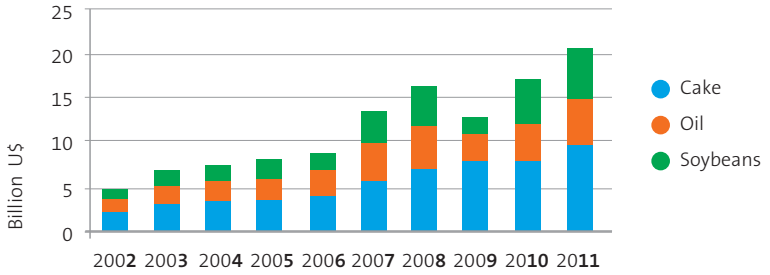
Soy extrusion/pressing to obtain oil and pellets or soy expeller is an industrial process that in the countries of the Southern Cone region is carried out at large scale, except in Uruguay. Graph 8 shows that Argentina, Brazil and Paraguay, in addition to exporting grains, export soy pellets and oil, while Uruguay only exports grains⁵³.

Table 5. Soy to be processed in exporter countries in 2012

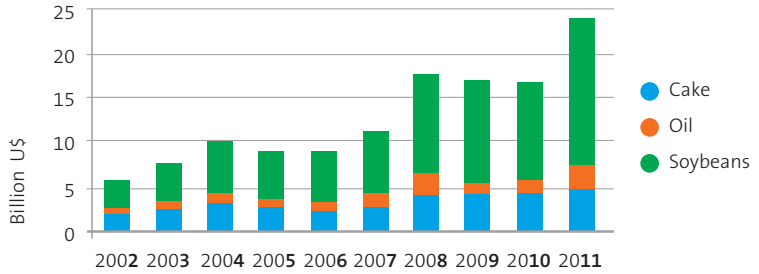
| Country | Production | Industrialized | % |
|----------------|-------------------|-----------------------|----------|
| US | 84,2 | 46,35 | 55 |
| Brazil | 66,5 | 38,08 | 57 |
| Argentina | 40,1 | 35,89 | 90 |
| Paraguay | 4,0 | 0,95 | 24 |
| Canada | 4,3 | 1,41 | 33 |
| Uruguay | 2,1 | 0,14 | 6 |

Total soy production and soy production destined to the industry is shown for each country. Volumes are presented in millions of tonnes. The percentage shows the proportion of industrialized soy in the total amount of soy produced in the country. Based on data by the USDA Foreign Agriculture Service and estimates by the author.

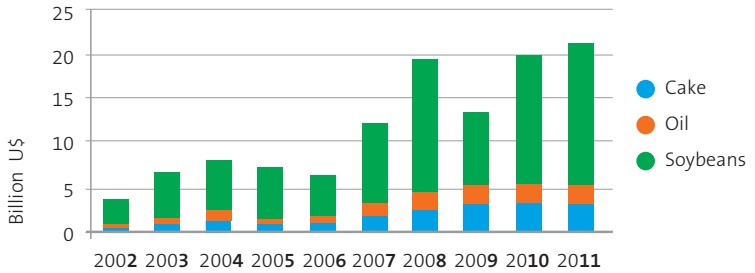
Argentina



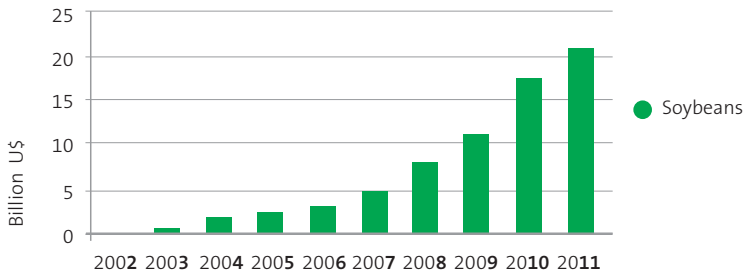
Brazil



Paraguay



Uruguay



Graph 8. Evolution of soy and derivatives exports in Southern Cone countries in 2002-2011. The graphs show the evolution of soy, soy oil and soy pellets exports in billion US\$. Based on data by FAOSTAT.

INDUSTRIALIZATION OF SOY IN URUGUAY

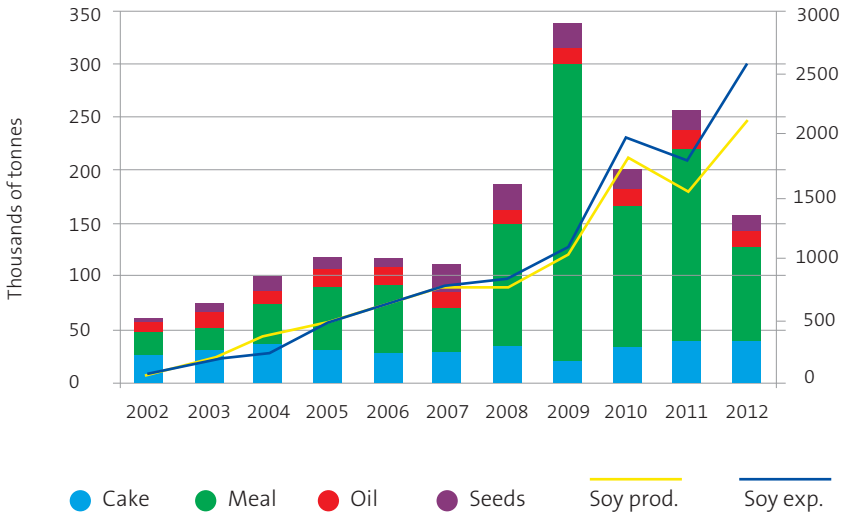
The Uruguayan industry absorbs approximately 140,000 tonnes of the almost three million tonnes of soybeans produced in the country nowadays per year. These industries produce oil, pellets and biodiesel and aim to meet the local demand mainly supplied by imported products.

COUSA is the main company in the oil production sector, processing 90,000 tonnes of soybeans, sunflower and canola per year. This company plans to build a plant able to process 1200 tonnes of soy per day, which would significantly increase their demand of soy⁵⁴. In an agreement with State company ALUR (Alcoholes del Uruguay), a biodiesel production plant was built at COUSA's industrial complex to produce biodiesel from vegetable oils that will produce 16,000 tonnes annually⁵⁵.

ALUR has become a strong promoter of the industrialization of oil crops to obtain biodiesel, high protein content flour for animal feed and other sub-products. In 2013, this company opened another biodiesel production plant with which, added to COUSA's plant, it aims to produce 72,000 tonnes of the fuel per year, in addition to 140,000 tonnes of flour for animal feed. These projects will require around 200,000 tonnes of oil crops (soy, sunflower and rapeseed)⁵⁶. Currently, ALUR requires 60,000 tonnes of soy⁵⁷.

Other smaller industries are Mundirel, BIOGRAN and Panarmix. Mundirel started its operations in 2006 and focuses on the production of soy oil, biodiesel and animal feed. Its processing capacity amounts to 33,000 tonnes annually. BIOGRAN has two plants to produce biodiels from soy oil that add up a processing capacity of 18,000 tonnes per year, producing also soy expeller⁵⁸. Panarmix is a new company in the sector which opened its plant in October, 2012, in Nuevo Berlin. This plant has the capacity to press 10,000 tonnes of soy annually with a production expectation of 8,000 tonnes of pellet and 1,400 tonnes of soy oil.⁵⁹ Soy imports with added value

>>> Soy imports with added value



Graph 9. Evolution of soy derivatives imports, exports and soy production in Uruguay in 2002-2012 Bar charts show the evolution of soy pellets, flour, oil and seeds. Line charts show the evolution of soy production and exports. All values are expressed in thousands of tonnes. Bars are associated to the left vertical axis and lines to the right one. Based on data by MGAP-DIEA.

The industries described above do not cover the national demand of industrialized products derived from soy. In 2012, Uruguay imported 40,000 tonnes of pellets and 87,000 tonnes of soy flour at U\$ 57 million dollars to produce animal feed. Uruguay also imported 15,000 tonnes of raw and refined soy oil at U\$ 19 million and 15,000 tonnes of soybeans for seeds at U\$ 14 million⁶⁰ (See Graph 9).

The fact that soy is exported as a raw material without added value needs to be added to the fact that the domestic demand for soy derivatives is met by importing them from countries of the region, mainly Argentina. Uruguay's regional role in the soy chain is limited to primary production and the provision of port services for grain storage and transportation from the barges that arrive through the Paraguay-Parana waterway to transoceanic grain tankers.

CONTRIBUTIONS OF SOY

Taxes

The role of primary producer and service provider played by Uruguay in the framework of the regional soy business is a reflection of how it was developed in the country. The main actors in this development were large Argentinean companies that arrived to Uruguay attracted by the tax advantages provided by the country. In spite of the fact that lands in the Uruguay River's Coast are less productive than those of the humid Argentinean Pampa, sowing pools in Argentina have developed their production activity in Uruguay to escape tax withholdings on commodities exports. The development of the soy chain in Uruguay has been featured by the interest to produce commodities with the least fiscal disadvantages possible. Industrial development was not what interested the first players in the Uruguayan soy agribusiness.

35% of withholdings on commodities exports (including soy-based processed products)⁶¹ in Argentina are therefore the basis of the soy business in Uruguay. In 2008, Argentinean consultant Openagro estimated that the tax burden in Argentina on soy production was 2.5 times higher than that of Uruguay⁶². The absence of commodities export withholdings was the main comparative advantage that set the balance of Argentinean soy businessmen in favor of Uruguay.

The tax contributions of the agricultural sector in general are very low when compared to other economic activities in Uruguay. The percentage of taxes contributed by the agricultural sector with reference to the Agricultural GDP ranges between 5% and 7%, while the entire economic sector contributes to 30% of the national GDP⁶³. The taxes imposed on this activity are the IRAE (Economic Activities Income Tax) and IMEBA (Agricultural Property Transfer Tax). The IRAE tax is the 25% of profits while IMEBA is imposed on the value of sales. In the case of grains and oilseeds, it is 2%. If the grain is exported, an extra 3.4% is added. Oyhantcabal y Narbondo⁶⁴ estimated that in 2009 soy contributed to US\$ 20.3 million in taxes, on a Net Production Value (NPV) of US\$ 4324 million.

Land price increase

The demand by big companies for access to arable lands has increased the price of land leasings and sales. From 2002 to 2012, the value of land grew by 9-fold and leasings over 6-fold^{65,66} (Graph 10). These increases generate competition difficulties for medium and small farmers who manage other productive systems, forcing them to abandon production or to move to lower-quality lands. In this way, the area occupied by milk production has been reduced by 15% (about 150,000 hectares) in the past decade and cattle systems have reduced by 30% the area occupied by cattle fattening fields^{67,68}.

>>> Land price evolution



Graph 10. Evolution of the average price of land leasing and purchases. Based on DIEA data, "Land Price" series.

Migration, proletarianization and land concentration

According to data by the latest Agricultural Survey, 21% of all agricultural establishments have disappeared between 2000 to 2011, 31% of establishments with less than 100 hectares and 40% of those with less than 20 hectares. This shows the rapid land concentration process that is taking place in the hands of increasingly bigger companies. In parallel to this production exclusion process, another one is taking place through which more and more farmers abandon the management of their fields. This process can be explained through the fact that many traditional farmers, medium and large, find it more attractive to lease their fields to new farmers, than produce them directly, and therefore they stop being agricultural farmers to become renters. Others stay in the rural sector providing services to large companies, which generates the proletarianization process of the rural population. This makes the rural population to be increasingly away of land management practices.

Table 6. Number of establishments surveyed in 2000 and 2011, according to scale in hectares. Based on DIEA-MGAP, 2012⁶⁹

| Sizes of establishments | Year of Survey | | Difference 2011- 2000 | |
|-------------------------|----------------|---------------|-----------------------|---------------|
| | 2000 | 2011 | Absolute | Relative% |
| 1 a 19 | 20.464 | 12.274 | - 8.190 | - 40,0 |
| 20 a 99 | 15.581 | 12.657 | - 2.924 | - 18,8 |
| 100 a 199 | 6.382 | 5.540 | - 842 | - 13,2 |
| 200 a 499 | 6.783 | 6.473 | - 310 | - 4,6 |
| 500 a 999 | 3.887 | 3.808 | - 79 | - 2,0 |
| 1000 a 2499 | 2.919 | 2.970 | 58 | 2,0 |
| 2500 y más | 1.122 | 1.168 | 46 | 4,1 |
| Totales | 57.131 | 44.890 | - 12.241 | - 21,4 |

Benefits?

Soy has revolutionized the Uruguayan agriculture in the past decade. Its emergence in the hands of "new farmers" has brought the Uruguayan agricultural sector a new way to manage our agroecosystems. The idea is to invest capital and obtain the highest possible profit in the least amount of time, using technologies that simplify and allow to homogenize the management of agroecosystems. At large scale, the financial business seems profitable. This explains how investment funds that operated in other areas of economy turned to investing in this type of agriculture.

The demand for inputs and services that caused the increase of soy production invigorated the agricultural sector and this is how companies operating in this area have managed to thrive, some of them national companies that were already established, or transnational corporations that arrived later. These companies mainly trade imported inputs, and therefore the wealth brought to the country is minimum.

The Uruguayan soy chain is promoted by soybeans exports, without any added value in the process. This is a value chain supported by the exploitation of primary resources at an unsustainable rhythm and intensity. Erosion, water pollution and loss of diversity are some of the problems already experienced. With reference to the intensive use of primary resources, what the soy agribusiness leaves the country is relatively little. Low taxes, low added value and not many job sources. Fiscal and investment promotion policies in force in Uruguay pave the way for this to happen.

Agricultural landowners are another sector benefitted by the soy production increase given the rise in the price of land leasings, but as a consequence, many small and medium producers who depended on renting lands to third parties to keep their own production systems had to abandon production. Migration, proletarianization and the transformation of producers into renters are maybe the deepest structural changes brought by the soy business into the Uruguayan agricultural sector.

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