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Required Report - public distribution

**Date:** 7/6/2010

**GAIN Report Number:**

## Argentina

## Biofuels Annual

## Argentina

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**Report Highlights:**

Argentina continues to expand rapidly its biofuels industry. Until recently, investments were directed at biodiesel for exports, but now, with mandates in place, investments in ethanol and biodiesel are attracted primarily by a growing domestic market. The government recently announced increases in biodiesel blending ratios for the last part of 2010 and a probable further increase in 2011, as a way of reducing imports of fossil diesel. Despite the EU's regulations on soy-based biodiesel, Argentine traders are confident that exports will continue at good pace in 2011. There are no bioethanol exports from Argentina projected in the short term.

**Post:**

Buenos Aires

**Executive Summary:**

Argentina has rapidly become an important player in the world of biofuels. Production in 2011 is projected at 2.9 billion liters of biodiesel and 280 million liters of bioethanol. First, the export market of biodiesel, and more recently the local biofuel Law mandate, continues to attract large investment in the biofuels sector. The government set attractive prices for both ethanol and biodiesel sold under the domestic market mandate.

The Argentine biodiesel industry was initiated in 2007 at a commercial scale, when two large plants began to operate. The first big investment tranche focused on the export market and was mainly led by local and international grain companies with large soybean oil crushing plants. In three years biodiesel production capacity reached 2.6 billion liters. There are several large projects announced, both in new plants and in expanding capacity of existing ones. The growing domestic market is at present attracting most of the current and future investment. Private analysts forecast production capacity at 6 billion liters by 2015.

The ethanol industry is much smaller and began to develop later. So far, it is based exclusively on the sugar industry, and its primary focus is the domestic market mandate. The sugar industry welcomed this new alternative which allows them to direct sugarcane surpluses to the profitable local ethanol market rather than exporting sugar. The government has not yet approved ethanol projects which are not sugarcane-based. There are a few projects to build biorefineries for corn and sorghum, and one for manioc, but they are still awaiting official approval. If authorized, they would not begin production until 2012. There are strong rumors that the ethanol mandate could increase to 8 percent in 2012, demanding about 500 million liters.

There are a few plants in the country which started, or will soon start, to generate electricity from biomass and the recovery of methane. Almost all sugar mills produce electricity from bagasse for their own use, but there are four sugar mills which co-generate electricity and sell the excess to the electrical grid. There are also lemons, dairy and pork operations processing industrial waste to capture methane to generate electricity for their own demand. The city of Cordoba recently appointed a US company to recycle urban waste and capture methane to generate 20 percent of the city's energy demand.

The domestic policy which mandates diesel be mixed at a 5 percent ratio with biodiesel and gasoline be mixed with 5 percent ethanol, was put in place during the first part of 2010. However, because very few ethanol refineries were ready to comply with it in early 2010, the government established a monthly chronogram for 9 companies eligible to participate. During the first semester the mix is expected to be less than 2 percent, increasing to 5 percent in the second half (when the sugar cane harvest is at full swing).

In the case of biodiesel, it was not until February 2010 that the government published Resolution 7/10, establishing a price formula and setting volumes per company. In order to begin with the mandate, the government agreed with local biodiesel producers that companies not eligible by law to sell in the domestic market (the case of most large processors which were only eligible to export) be allowed to do so in 2010. The government recently announced that it will increase the biodiesel mix to B7 in August 2010 and probably to B10 in 2011.

Argentina is the world's number one biodiesel exporter, with total shipments projected at nearly US\$1 billion in

2010. Exports in 2011 are projected at 1.7 billion liters. By far, the main market is the EU (the Netherlands, Spain and Italy). However, this volume could eventually be significantly lower if the EU restricts soy-based biodiesel due to new legislation. The EU's Climate and Energy Package Directive, as it stands today, requires that by December 2010, biofuels used must reduce greenhouse gas (GHG) emissions by at least 35 percent. The directive establishes that soy-based biodiesel only reduces 31 percent. The Argentine government has recently made a presentation showing that its biodiesel meets and exceeds the required limits. The Argentine government and traders are optimistic about overcoming this problem.

There are no bioethanol exports projected in the short term from Argentina, as local supply does not currently cover the 5 percent domestic market mandate.

### **Policy and Programs:**

Since 2007, Argentina has in place a regulatory framework to promote the production and use of biofuels. The main objectives of this framework are to diversify the supply of energy, to become more environmentally friendly, and to promote the development of rural areas (primarily nontraditional production areas), especially in benefit of small and medium sized agricultural producers. More recently, the government has realized the opportunity of biofuels, especially biodiesel, to reduce diesel imports. The framework focuses primarily on conventional biofuels, as Argentina already has a vast biodiesel industry based on soybean oil and a growing ethanol industry based on sugarcane. Current policy does not specifically focus on second generation or advanced biofuels. However, there are some official programs already researching in these types of feedstocks and technology.

Law #26,093, of 2006, mandates the use of biofuels in the beginning of 2010, with an obligatory mix of 5 percent of ethanol in gasoline and 5 percent of biodiesel in diesel. Under this Law, companies which produce biofuels have three alternatives: 1) to produce for the domestic market, taking advantage of various tax incentives; 2) produce for self-consumption, with similar advantages as in 1; and 3) produce for the export market, and not be eligible to receive tax incentives.

A summary of Argentina's biofuel law and regulation follows:

In April 2006, the Argentine Congress passed Law 26,093, which regulates and promotes the production and sustainable use of biofuels. In February 2007, the Executive Branch, through Decree 109, published the regulations for implementing the above law. Salient points of the Argentine biofuel law (and regulations) are:

Chapter I creates incentives for production and use of biofuels in the domestic market with a duration of 15 years (beginning on the date of the enactment of the law). It establishes that the Secretariat of Energy will be the controlling authority. The oversight of tax breaks will be under the control of the Ministry of Economy (every year this Ministry will set the maximum overall amount of the fiscal incentives directed to biofuels, and the percentage of this total that will accrue to individual companies participating in

the domestic market). Some of the responsibilities of the controlling authority, in general, are to establish quality levels, security conditions, registration of participating companies, approval of projects that benefit from incentives, and the percentage mix of biodiesel with diesel and ethanol with gasoline for the domestic market. Every year the controlling authority will establish the volumes of biofuels needed to comply with the law, determine and modify the percentage mixes, set prices of biofuels for the domestic market, establish volumes, terms and conditions for those producing for their own consumption, and approve exports.

Chapter II provides details concerning the incentives of the biofuels promotional regime for domestic use. To be eligible for incentives, companies have to operate in Argentina and be dedicated exclusively to biofuel production, with the majority of the company's equity in the hands of the government (i.e. government at either the national, provincial, or municipal levels) or agricultural producers (and producers' cooperatives). Companies have to operate under the above regulations and specifications, and will be assigned a percentage of the total tax break granted by the GOA (the law gives priority to small and medium enterprises, farmers, and entities that operate in nontraditional production areas). Biofuels governed by this promotional regime will be exempt from three specific taxes applied to fossil fuels. In addition, biofuel producers for the domestic market will enjoy tax breaks and other advantages (e.g. anticipated reimbursement of the value added tax or accelerated depreciation on capital investment). Eventually, Chapter II leaves open the possibility for producers to receive direct subsidies.

In January 2008, Congress passed Law 26,334, which promotes the production of bioethanol from sugarcane. This law allows sugar mills to participate under the biofuel promotional regime, maintaining the basic norms and regulations of the biofuel law. It also promotes exports of surplus ethanol.

More than ten provinces have adhered to the Biofuels Law, and in some cases, they provide additional tax advantages for investment and construction of biorefineries in their territory.

Under Law 26,190 of 2006, named National Support for the Use of Renewable Energy Sources, and its regulatory framework established in 2009, the government created program Genren (Renewable Generation). Its objectives are to reduce emissions of carbon dioxide and other GHG, to diversify Argentina's energy matrix and to promote regional economies throughout the country. The Law establishes that eight percent of the country's electricity consumption has to be supplied by renewable energy sources in the next ten years. In 2009, the national energy company opened a bid to purchase 1,015 megawatts of renewable energies (including wind, biofuels, biomass, photovoltaic, solar and small hydro power projects) through 15 year contracts. The government recently announced the winners; of which 110 megawatts will be generated from biodiesel (some 150 million liters could be used). Contacts estimate these projects will be operational by 2012.

Apart from the Genren program, the government wants to increase further the use of

biodiesel to generate electricity and replace imports of diesel. Sources indicate that Argentina imports approximately 2 billion liters of fossil diesel a year.

One of the key factors of the recent large investment in the local biodiesel industry has been the differential export tax on biodiesel vis-à-vis soybean oil. Soybean oil exports are taxed 32 percent while biodiesel exports are only taxed effectively 16.6 percent (nominal tax is 20 percent), and benefit from a 2.5 percent rebate. Export taxes were modified in March 2008, increasing from 5 percent, with a 2.5 percent rebate. The current net difference between the soybean oil export tax and biodiesel export tax is 17.8 percent in favor of the latter.

There are no specific official environmental or social sustainability criteria for biofuels in Argentina. However, being a major exporter of biodiesel, the government closely monitors other country's criteria and regulations in order to avoid any restrictions to Argentine exports. This is the case of the EU, which through its Climate and Energy Package, established that biodiesel from soybean oil does not meet the minimum GHG emissions saving level. Argentina is currently challenging this major issue, with great possibilities of being successful. The government has presented a study prepared by its Agricultural Research Institute, in which it takes into account the extensive adoption of no-till cropping, the short distance from the farms to the crushing, refining and port facilities, and to its modern and efficient industries. A similar situation occurred with EPA's Regulation of Fuels and Fuel Additives, and the changes to Renewable Fuel Standards. In mid-2009, the government of Argentina presented comments during the Public Hearing to show that Argentine soy-based biodiesel reduces GHG emissions far more than the established 22 percent. EPA's final rulemaking establishes that it meets the 50 percent reduction in GHG emissions required to qualify for the advanced biofuel volume standard.

The National Institute of Agricultural Research (INTA) and an agricultural research station in the north western part of the country are working on life cycle and energy balance at farm level for traditional crops (sugarcane, soybeans) and others (such as sweet sorghum, castor oil plant).

In late 2007, Argentina passed Law 26331 on Conservation of Native Forests to help its conservation, and to regulate the expansion of land for crop use and any other change in land use. There are some entities which point out the inconvenience of expanding soybean area, while reducing the area of other crops and pastures.

The biofuel law establishes that the Secretariat of Energy will encourage cooperative agreements between the public and private sectors to promote and encourage the development of production technology, and the use of biofuels. Aerolineas Argentinas, the national airline, and one of the biofuels chambers, recently signed an agreement to study and develop the future use of biofuels in its fleet.

The Ministry of Agriculture, through the INTA, conducts and coordinates most of the research in biofuels in Argentina. The National Bioenergy Program goals are to ensure the supply of sources of bioenergy in support of sustainable development, national

energy security, the reduction of poverty, the attenuation of climate change and environmental equilibrium. There are three specific objectives: 1) identification and characterization of the potential of different crops, waste and byproducts to produce energy, 2) the study and development of non-traditional crops with energy potential, and 3) the development of second generation biofuels, through the identification of new enzymes to degrade cellulose, genetic improvement of *Escherichia coli* to optimize ethanol production, and the isolation of fermenting microorganisms.

There are also provincial entities, public and private universities, and the private sector working on different projects. Some of these programs focus on jatropha, algae, castor oil plant, canola, sweet sorghum and miscanthus. Research is primarily focused on feedstocks which can be produced in areas not suited for agriculture and which do not compete with food production. A few programs are working on cellulosic biofuels, based on sugar cane, harvest residues, arundo donax (giant reed), sweet sorghum, and switch grass. There are also a few industries which are developing biogas facilities to use waste and reduce the cost of energy they consume.

Argentina in early 2010 joined the Global Research Alliance on agricultural greenhouse gases, established to increase international cooperation, collaboration and investment to help reduce the emissions intensity of agricultural production and increase its potential for soil carbon sequestration.

## **Bioethanol and Biodiesel:**

### **Bioethanol**

#### **Production**

The Biofuels Law mandates that gasoline be mixed with 5 percent bioethanol since the beginning of 2010. However, due to supply limitations, Argentina's mix ratio is expected at less than 3 percent in 2010. Several investments are expected to come in line during the current sugar cane harvest (May-October) adding additional capacity in the last part of the year. The total volume produced in CY2010 is estimated to reach 220 million liters, while output in 2011 would total 280 million liters, sufficient to fulfill the 2011 mandate. Private projections set local bioethanol production at 450 million liters in 2012.

In late 2008, the government established the mechanism by which ethanol projects would be authorized and also set the price and its adjustment formula. In late 2009, the Secretary of Energy announced participating companies and their volumes assigned for 2010. The volume for the period November 2009-December 2010 totaled

202 million liters, distributed among 9 local companies based on production capacity. All of them are sugar mills located in north western provinces.

Corn-based ethanol plants have not yet been approved by the Secretariat of Energy. However, contacts indicate that a cereal-based project in Cordoba province and a manioc ethanol plant in Corrientes province will soon be eligible to participate in the domestic biofuels program (probably in 2012). There are several other projects based on corn/sorghum, but they are also waiting for the government's approval to begin construction. These plants would produce 50 million liters each and are mainly promoted by private investment funds. Contacts indicate that projected returns are high, because the official ethanol price is very good, while corn or sorghum prices in the interior of the country suffer strong discounts due to transportation costs, and prices of co-products are very attractive due to the strong demand from feedlots and dairy operations.

Until now, sugarcane (local producers prefer not to make a distinction between direct cane and molasses) has been the natural feedstock used for ethanol in the initial stages of the new biofuel mandate program. Twenty years ago there was a gasohol program in the north western provinces, but was discontinued in 1989. Most mills have small distilleries which have been producing alcohol for non-fuel purposes. The Argentine sugar industry has large sugar surpluses which every year are exported to world markets, many times, at prices below cost. Contacts indicate that the price of ethanol under the domestic mandate will encourage sugar mills to turn into ethanol any surplus cane. Nonetheless, there is a strong commitment from the local sugar industry to continue supplying sugar to the U.S. under the tariff rate quota and to neighboring countries Chile and Uruguay.

In 2009, before the ethanol mandate began, Argentina produced approximately 22 million tons of sugarcane, of which it produced roughly 2.4 million tons of sugar and 220 million liters of alcohol for industrial use. The domestic sugar market plus exports to key countries, add approximately 2.0 million tons. The domestic market of industrial alcohol totals roughly 130 million liters. Therefore, the excess of sugar and alcohol add approximately an equivalent of 350 million liters of bioethanol.

Practically all sugar mills use their bagasse to generate electricity for their own use. However, a few have invested in co-generation plants to produce surpluses to sell to the electrical grid.

Argentina's bioethanol production capacity has grown from zero in 2008, to 120 million liters in 2009. Estimated capacity for 2010 is 270 million liters and 300 million liters in 2011. In 2009 there were only three sugar mills refining ethanol for fuel, while in the last part of 2010 there will be nine. There are a few mills building new distilling and dehydrating plants. Last year the province of Tucuman was working on a project to build one large dehydrator in the province, but finally the project was cancelled and each company will operate individual facilities. Most companies are investing in expanding storage capacity.

The financial situation of the bioethanol industry in Argentina is directly linked to the sugar industry. In general, mills are in a fairly good condition, much better than several years ago when sugar prices were low. The government established the price of ethanol and its adjustment scheme in a way to encourage investment and production.

In November 2008, the Argentine government established the price of bioethanol and its adjustment scheme under the biofuel mandate. The Secretary of Energy will publish the official price at a monthly basis which petrol refineries have to pay ethanol distilleries. This price will be the highest of two, being 1) based on the cost of production of a liter of ethanol of a sugarcane-based project, plus a given profit, or 2) the average price of unleaded gasoline in the north western provinces. Price 2 cannot be higher than 35 percent of price 1. In July 2010, the official price for ethanol under the mandate was pesos 2.870 per liter (equivalent to US\$0.73 per liter), very profitable compared to current production costs. Contacts indicate that the price of gasoline at the pump will increase less than 1 percent once the E5 is in place.

Most sugar mills are investing in their biorefineries to increase production capacity, storage tanks, and improve efficiency. Cogeneration of electricity is also growing, but at a slower rate, as it involves significant investment.

## **Consumption**

Ethanol consumption for fuel purposes in 2011 is forecast at 280 million liters. This volume practically covers the 5 percent mandate. There are strong rumors that the government, with the agreement of the private sector, could raise the blending ratio



to 8 percent in 2012.

Based on official statistics, diesel represents 66 percent of the total demand for transportation, followed by gasoline and natural compressed gas with 17 percent each. Gasoline is used almost exclusively by cars, with an expected demand of approximately 6 billion liters in 2010.

So far, the blends of ethanol in gasoline are limited by the Secretariat of Energy through the mandate. They are not specifically limited by engine warranties, greenhouse gas sustainability requirements or other factors. However, if any change is desired, the government consults with the automobile industry to check the effects on the engines. Local bioethanol producers indicate that no modifications have to be made to engines when using gasoline mixed with less than 20 percent ethanol.

Despite Argentina's exports of flex-fuel vehicles (primarily to Brazil), they are not used domestically. A Japanese car manufacturer recently presented the first gas-electric hybrid car in the market. Very few are seen in the streets, as their price is still comparatively very high.

Rail transport use is quite limited in Argentina. A few decades ago the country had an extensive network, reaching almost the entire country. However, the system was rapidly dismantled, and very few tracks remain in operation. Nowadays, roughly 25 percent of the domestic cargo is moved by train.

## **Trade**

Argentina does not expect to export ethanol for fuel purposes in the short term. Despite production is expected to grow, it is still limited. Furthermore, there is the possibility of increasing the mandate in the future. Corn producers indicate that once their distilleries are authorized by the government and begin producing, there could be some exports. They believe that some exports could be done under an eventual Mercosur-EU agreement. Until 2009, exports of ethyl alcohol for non-fuel use ranged between 80 and 100 million liters annually, mostly going to Chile, the U.S. and Netherlands. With the mandate in place, since early 2010, exports dropped 65 percent in the first quarter of 2010 and are expected to continue to fall further.

One sugar mill in Tucuman is reported to import small volumes of alcohol from Bolivia to then turn into bioethanol.

## **Ending Stocks**

Ethanol is produced during the sugarcane harvest, which usually begins in May and finishes in October-November. Therefore, mills will produce during this period the ethanol they will sell in the last part of the year plus what they will supply in the first half of the following year. Industry contacts expect some 95 million liters of stocks at the end of 2010 and 2011.

<b>Conventional &amp; Advanced Bioethanol (million liters)</b>						
CY	2006	2007	2008	2009	2010	2011
Production				35	220	280
Imports				0	0	0
Exports				0	0	0
Consumption				0	160	280
Ending Stocks				35	95	95
<b>Production Capacity (Conventional Fuel)</b>						
No. of Biorefineries				3	9	9
Capacity				120	270	300
<b>Production Capacity (Advanced Fuel)</b>						
No. of Biorefineries						
Capacity						
<b>Co-product Production (1,000 MT)</b>						
Product Y						
Product Z						
<b>Feedstock Use (1,000 MT)</b>						
Molasses				135	850	1080
Feedstock B						
Feedstock C						
Feedstock D						

## **Biodiesel**

### **Production**

Biodiesel production continues to expand in Argentina as more investments come on-line. Production for 2011 is projected at 2.9 billion liters, significantly larger than the estimated output for 2010. Argentina is now one of the world's four largest biodiesel producer, and the world's number one exporter.

The number of total biodiesel plants is unknown, as there are many small ones which are not officially registered. Some private sources estimate that there are approximately 100 of them, of which 70 percent are small. Last February, the government distributed the mandate volume among 19 companies of significant size. The big ones, ranging capacity of 110-550 million liters/year, were built with the focus on exporting. There are a few large companies which need to buy feedstock (soybean oil) from nearby large crushing plants. Lastly, there is a group of about 10 small companies, ranging capacity of 10-60 million liters/year, which focus almost exclusively on the domestic market under the biofuel mandate.

Biodiesel production in Argentina commenced not long ago, with very small plants for self-consumption. In late 2007, the first two large-scale plants were inaugurated. The large plants were mostly built for the export market by international grain trading companies. These companies already operated large crushing facilities in the Rosario area, where the world's largest concentration of oil crushing plants can be found. In most cases, biodiesel refineries were built next to crushing facilities. Rosario is strategically located next to the river, allowing processing facilities to have their own ports, all in the heart of the soybean production area. Santa Fe province accounts for about 80 percent of the country's biodiesel production capacity.

Argentina is the world's third largest soybean producer and the world's top soybean oil and meal exporter. Its crushing capacity is around 50 million tons a year, with an annual oil production of about 7.0-7.4 million tons. Most local crushers see the production of biodiesel as an additional product that fits naturally in their global business. It provides them with new opportunities for diversifying products and markets. Argentina is currently having a commercial dispute with China, one of its top export markets, over soybean oil exports. China closed imports of soybean oil from Argentina claiming higher than allowable levels of hexane residues. Most contacts are optimistic and point out that the dispute will soon be resolved. The private sector and even the government have seen the biodiesel industry as a way to redirect part of the soybean oil affected by the current dispute.

The rapid development and large investments in the local biodiesel industry was partly encouraged by the differential export tax on biodiesel vis-à-vis soybean oil. The current net difference between the soybean oil export tax and biodiesel export tax is 17.8 percent in favor of the latter.

After agreeing with the local biodiesel industry late last year, the Secretariat of Energy established in February, through Resolution 7/10, the price (and adjusting formula) for biodiesel under the mandate beginning in 2010 and assigned quotas to 19 companies interested in participating in the domestic market. Based on the projected diesel demand for 2010 the government assigned 860,000 tons (equivalent to 979 million liters) of biodiesel. Because the mandate began effectively in late March, contacts estimate that the total amount of biodiesel supplied to the domestic market this year will be close to 650 million liters, plus an estimated consumption from small plants of 50 million liters.

Soybean oil is the feedstock which all plants, with the exception of very small ones that recycle used vegetable oil, currently use to produce biodiesel. It is expected to remain that way for some time. Until the emergence of the local biodiesel industry a few years ago, more than 95 percent of the soybean oil was exported. Most large crushers now have the alternative to turn oil into biodiesel which then can be exported or sold to the domestic market. Despite investment and research in other feedstocks such as algae, jatropha, canola, etc, it will be some time until those alternatives can be produced commercially in large volumes.

Biodiesel production capacity is growing significantly, typically coming from (local and international) large grain companies which are already operating in the local biodiesel industry. Most companies are expanding their capacity with just a few new players coming into the business. The private sector estimates that the country's production capacity will reach 3.2 billion liters by 2011. They also project that capacity will grow to 6 billion liters by 2015. As an example of this, a joint venture between two local grain/food companies and an international trading group recently announced a new investment of US\$350 million to build a new soybean crushing plant, a biodiesel plant and a port.

The local biodiesel industry is in good financial situation as most large biorefineries are in hands of financially sound local and international companies. There are also a few plants which are managed by private investment companies. In most cases, they are

increasing capacity, showing their good financial situation and the attractiveness of the business.

Most large biodiesel plants were designed for export and have their own soybean crushing facilities and ports. Now that they can participate in the local domestic mandate, they have three alternatives to market their products: 1) export soybean oil, 2) export biodiesel, and 3) sell biodiesel in the domestic market under the mandate. Industry contacts indicate that, at current prices, the best alternative is to sell biodiesel under the domestic mandate, followed by exports of biodiesel, and lastly, export soybean oil.

The Secretariat of Energy published last February the price of biodiesel (and its adjusting formula) for the domestic mandate, which will be adjusted every month. The price takes into account the local price of soybean oil, transportation cost, methanol, and other costs (including energy, labor, chemical products). It also adds US\$28 per ton as profit. In July 2010, the official price for biodiesel under the mandate was pesos 3358 per ton (equivalent to US\$0.75 per liter). Contacts indicate that the price of diesel at the pump increased about 2.5 percent because of the B5.

## **Consumption**

Biodiesel demand for 2011 is forecast at 1.19 billion liters. This includes a fully supplied year (in 2010 the program began in March and was not fully implemented until several months later), a probable increase of the blending from 7 to 11 percent, and additional volumes to generate electricity.

There is yet no official data on domestic consumption. Small plants are not controlled and there is not yet a system in place to register the volumes sold by those participating in the recently established domestic market mandate. Under the assigned quotas, the government establishes every month the volume which each company has to sell to oil blenders. Although there are no official data, contacts indicate that the current blending ratio ranges between 4.0-4.5 percent.

There are good chances that the mandate mix will be increased further to 10 percent in 2011. If this is so, Argentina would become the country with the highest mix ratio in the world. This is good news for the local biodiesel industry, which now has an

important market alternative, and for the government which can easily substitute expensive diesel imports during peak demand. Some sources indicate that the mix could reach 20 percent in 2014, although car manufacturers are hesitant and doubtful about the effects on engines and warranties.

Of the projected demand for diesel oil in the domestic transport market in 2010, roughly 40 percent will be used by the cargo sector, 36 percent by the agricultural sector, 15 percent by automobiles, and the balance by passenger transportation. Fossil diesel consumption in 2009 totaled 12.6 billion liters.

## **Trade**

Argentine biodiesel exports for 2011 are projected at 1.7 billion liters, the highest ever. Despite strong efforts in the EU to limit imports, it is still expected to continue to be the main destination for Argentine biodiesel. A key factor which will influence final shipments is whether the EU will implement, in December 2010, the Climate and Energy Package, as it stands today. In it, the EU established that biofuels used must reduce GHG emissions by at least 35 percent, and established that soybean oil-based biodiesel only reduces 31 percent. Argentina recently made a presentation to the EU's Joint Research Center to try to increase the level of emissions reduction of its biodiesel. Argentina claims that its soybean industry is very efficient due to the extensive use of no-till system production, short distances to processing and port facilities, and to its crushing and biodiesel modern plants. Contacts indicate that if the EU does not modify current levels, Argentina's exports will be negatively affected. Post contacts indicate that probably local product will have to present special certification demonstrating that the level of GHG emissions savings is higher than established by EU legislation. Local traders are optimistic that this will not be a problem during 2011. If so, then Argentina could expect exports of about 1.6 billion liters to the EU, and some exports to Peru and a few other minor markets. If restrictions are finally imposed, exports could be 30-50 percent lower than projected.

Argentine biodiesel exports are expected to continue enjoying differential export taxes vis-à-vis soybean oil. Currently the net difference is 17.8 percent in favor of biodiesel exports.

## Ending Stocks

Local traders indicate that biorefineries have the capacity to stock around 60,000 tons (70 million liters) of biodiesel. Some capacity is expected to be added in 2011.

## Statistical Tables

<b>Conventional &amp; Advanced Biodiesel (million liters)</b>						
CY	2006	2007	2008	2009	2010	2011
Production	20	205	860	1340	2100	2900
Imports	0	0	0	0	0	0
Exports	0	185	780	1300	1400	1700
Consumption	20	20	20	30	700	1190
Ending Stocks	0	0	60	70	70	80
<b>Production Capacity (Conventional Fuel)</b>						
No. of Biorefineries	6	9	18	30	30	35
Capacity	175	665	1080	1650	2600	3200
<b>Production Capacity (Advanced Fuel)</b>						
No. of Biorefineries						
Capacity						
<b>Feedstock Use (1,000 MT)</b>						
Soybean oil	18	180	760	1180	1850	2550
Feedstock B						
Feedstock C						
Feedstock D						