

BIOFUELS IN ARGENTINA



Ing. Héctor A. Huergo - AABH
Argentine Association of Biofuels & Hydrogen
Ing. Sebastian Senesi - FAUBA

BIOFUELS OPPORTUNITIES

- Biodiesel
- Ethanol
- Biogas
- Others

COMPARATIVE ADVANTAGES FOR THE DEVELOPMENT OF BIOFUELS IN ARGENTINA

- Plenty of **raw materials** and **strong suppliers**
- Argentina is an **Export Oriented Country**. Domestic consumption is 5% of total Oilseed production. So, **95%** of total oilseed production goes to the export market. In 2007 it will produce 6,5 mill ton of soybean oil, **6,2 mill ton exports** and the remainder 0,3 mill tons for domestic market
- The new Biofuels Law promote the investment in new projects. The same plant that crush soybean and export the SBO, now produce biodiesel, and export it.

COMPARATIVE ADVANTAGES FOR THE DEVELOPMENT OF BIODIESEL IN ARGENTINA

- Large soybean supply, with a 3 million-ton-growth per year since 1996. **50 million tons** in 2008 with 18% of oil, 9 million tons of soybean oil
- Large sunflower supply: **4 million tons** with 50% of oil
- **Highly competitive agroindustrial complex.** The main international parties of the business have new, large scale plants installed in the ports of the soybean region. Potential idle capacity.
- Possibility to import soybean from Paraguay, Brazil, Bolivia, and Uruguay.
- Export Oriented Country as a Strong Culture
- The possibility of extending the agricultural border and developing alternative energetic crops that can grow in different climates





CRUSHING CAPACITY OILSEEDS

CRUSHING CAPACITY

156700

M.Tons / Day

Basis 330 Days/Year

51711000

M.Tons / Year

To Understand Soybean Oil Market of Argentina

| Crop Year | Production | | Soybean Oil | | | |
|-------------|----------------|-------------------|------------------|--------------|----------------|------------|
| | SBS Production | Crushing Industry | Total Production | Domestic Use | Export Surplus | Variation |
| 1997 | 11700 | 11000 | 1980 | 50 | 1930 | |
| 2007 | 47000 | 34500 | 6210 | 200 | 6010 | 4080 |
| 2008 | 50000 | 38000 | 6840 | 300 | 6540 | 530 |
| 2017 | 60000 | 58000 | 10440 | 600 | 9840 | 3300 |

Soybean Oil World Demand 2001/07

| Evolucion Producción-Comercio-Consumo ACEITE DE SOJA | | | | | | |
|--|------------|------|----------|------|-----------------|------|
| | 2000/01 | | 2006/07 | | 2000/01-2006/07 | |
| | Producción | % | Comercio | % | Consumo | % |
| 2000/01 | 25,21 | | 7,64 | | 25,21 | |
| 2006/07 | 34,72 | | 9,49 | | 35,24 | |
| Mundial | 9,51 | 38% | 1,85 | 24% | 10,03 | 40% |
| 2000/01 | 8,29 | | 0,79 | | 7,55 | |
| 2006/07 | 8,97 | | 0,54 | | 8,62 | |
| United States | 0,68 | 8% | -0,25 | -32% | 1,07 | 14% |
| Principales Exportadores | | | | | | |
| 2000/01 | 3,07 | | 2,98 | | 0,11 | |
| 2006/07 | 5,95 | | 5,48 | | 0,46 | |
| Argentina | 2,88 | 94% | 2,5 | 84% | 0,35 | 318% |
| 2000/01 | 4,12 | | 1,42 | | 2,89 | |
| 2006/07 | 5,21 | | 2,11 | | 3,12 | |
| Brazil | 1,09 | 26% | 0,69 | 49% | 0,23 | 8% |
| Principales Importadores | | | | | | |
| 2000/01 | 2,37 | | 0,9 | | 3,27 | |
| 2006/07 | 6,76 | | 2,1 | | 8,76 | |
| China | 4,39 | 185% | 1,2 | 133% | 5,49 | 168% |
| 2000/01 | 2,84 | | 0,58 | | 1,86 | |
| 2006/07 | 2,46 | | 0,6 | | 2,75 | |
| EU-25 | -0,38 | -13% | 0,02 | 3% | 0,89 | 48% |

Soybean Oil Demand 2001/07

- In the last 7 years world soybean oil demand has been **increased in 1,85 mill tons**
- In the same period **Argentina has increased its soybean oil exports in 2,5 mill tons**
- **CONCLUSION:** Argentina has captured **100%** of the increasing in global demand.

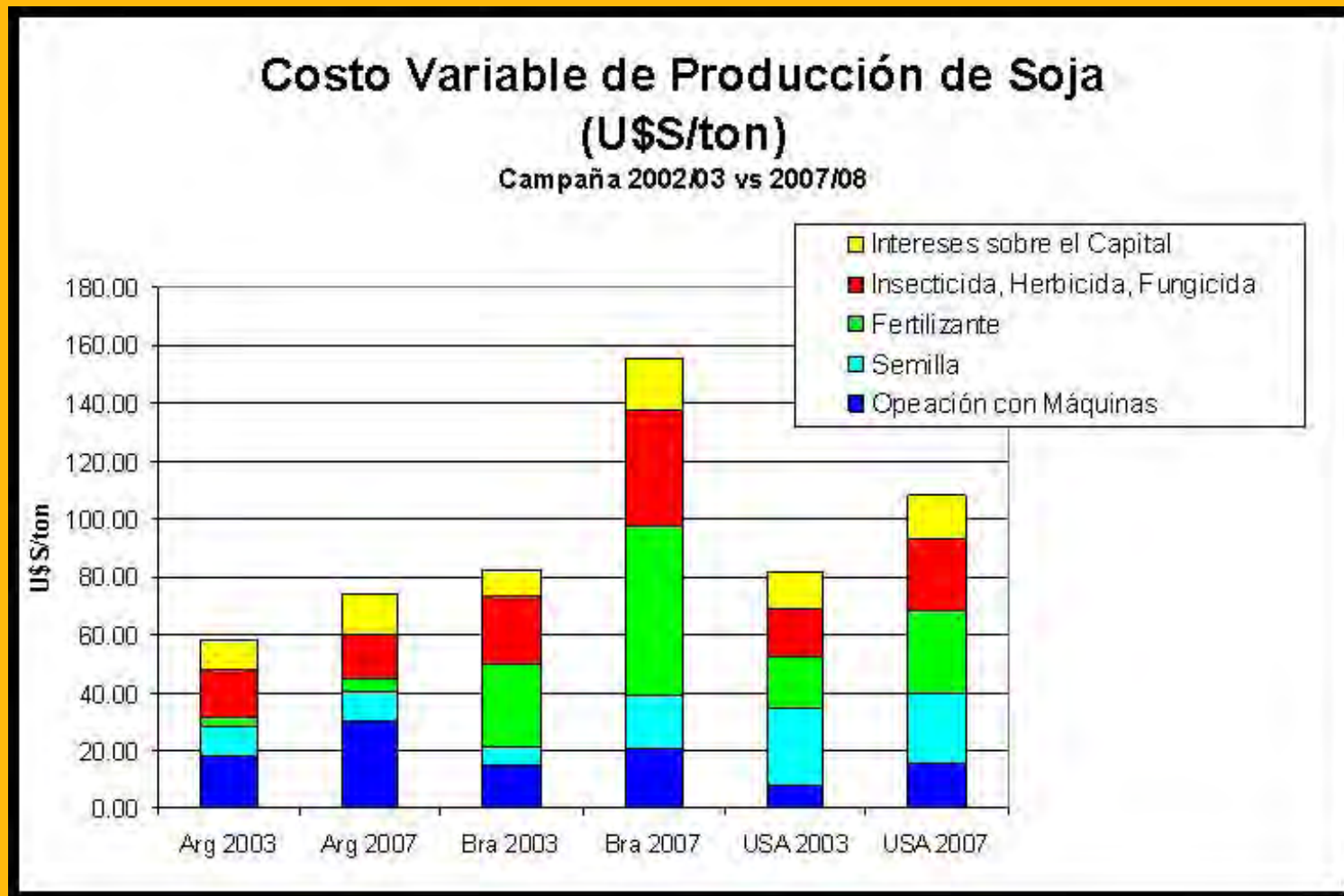
Soybean Meal World Demand 2001/07

| Evolucion Producción-Comercio-Consumo HARINA DE SOJA | | | | | | |
|--|------------|-----------------|----------|------------|---------|-------------|
| | | 2000/01-2006/07 | | | | |
| | Producción | % | Comercio | % | Consumo | % |
| 2000/01 | 110,26 | | 39,06 | | 110,51 | |
| 2006/07 | 148,88 | | 50,01 | | 149,18 | |
| Mundial | 38,62 | 35% | 10,95 | 28% | 38,67 | 35% |
| 2000/01 | 34,69 | | 6,49 | | 28,3 | |
| 2006/07 | 37,82 | | 7,03 | | 30,94 | |
| United States | 3,13 | 9% | 0,54 | 8% | 2,64 | 9% |
| Principales Exportadores | | | | | | |
| 2000/01 | 13,75 | | 13,24 | | 0,48 | |
| 2006/07 | 24,34 | | 23,64 | | 0,75 | |
| Argentina | 10,59 | 77% | 10,4 | 79% | 0,27 | 56% |
| 2000/01 | 17,38 | | 10,52 | | 6,96 | |
| 2006/07 | 21,71 | | 12,5 | | 9,36 | |
| Brazil | 4,33 | 25% | 1,98 | 19% | 2,4 | 34% |
| Principales Importadores | | | | | | |
| 2000/01 | 11,49 | | 1,5 | | 12,98 | |
| 2006/07 | 29,95 | | 0,7 | | 30,25 | |
| China | 18,46 | 161% | -0,8 | -53% | 17,27 | 133% |
| 2000/01 | 13,84 | | 18,9 | | 26,45 | |
| 2006/07 | 10,82 | | 22,55 | | 32,62 | |
| EU-25 | -3,02 | -22% | 3,65 | 19% | 6,17 | 23% |

Soybean Meal World Demand 2001/07

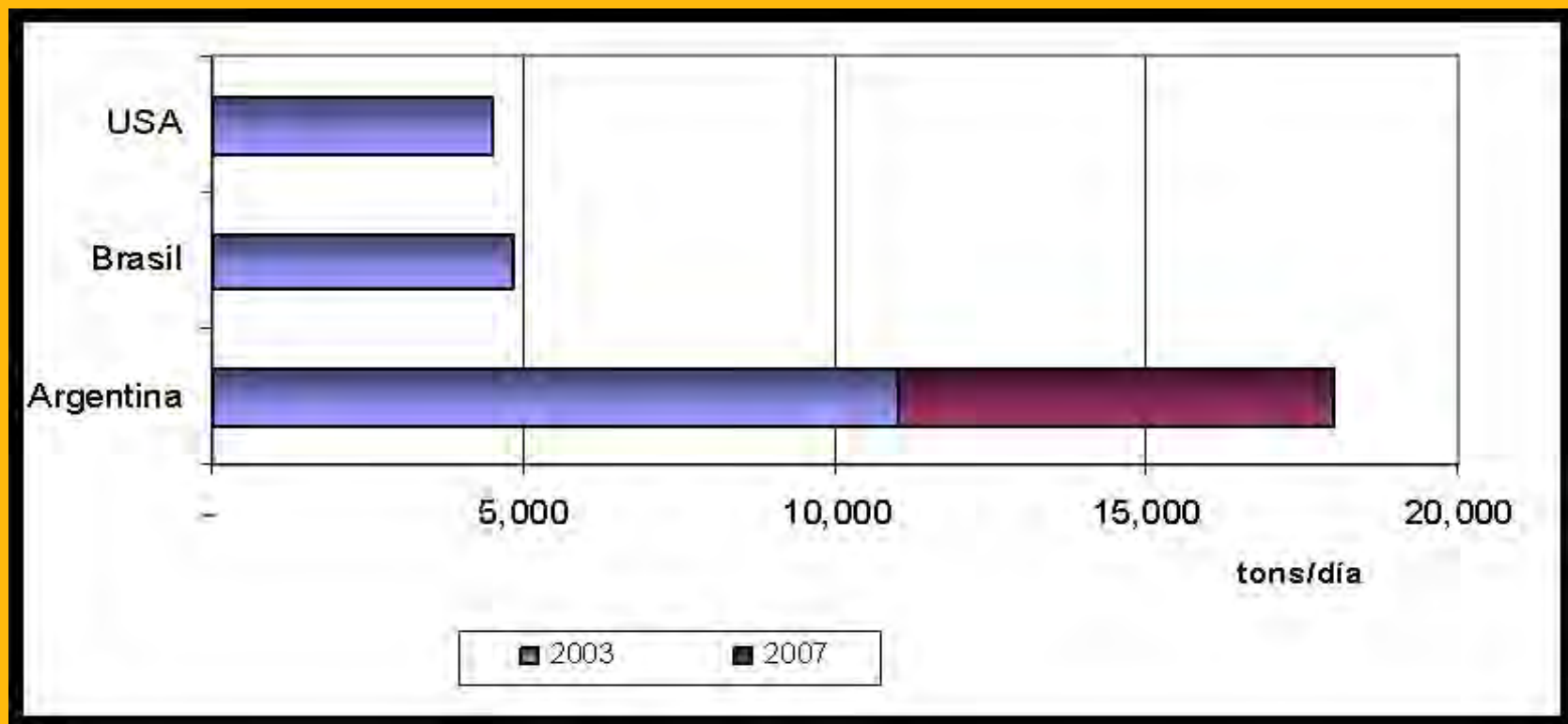
- In the last 6 years soybean meal world demand has been **increased in 10,95 mill tons**
- In the same period Argentina **has increased its soybean meal exports in 10,4 mill tons**
- **CONCLUSION:** Argentina has captured **95%** of the increasing in global demand.

Argentina has the lowest production cost of soybean of the world



Why Argentina is the most competitive country in the soybean crushing industry

Because: It has the highest crushing daily capacity of the world.



OPPORTUNITIES

- The big opportunity is the international market of biodiesel
- **1.3 billion of m3 of diesel are consumed annually. (world)**
- The total production of vegetable oils amounts to 130 million tons, **only 10%**
- **Argentina is the world's largest exporter of vegetable oil (from oilseeds) and has idle capacity**

GOOD SUPPLY OF GRAINS AND VEGETABLE OILS IN ARGENTINA

- Existence of the world's most efficient oil seed industrial complex with important exportable balances. **5%** of the current gas oil market (mandatory blend by 2010) **could be supply with less than 9%** of the national production of oils.
- Very low industrialization rate of corn and sorghum with important exportable balances of raw grains. **5% of the current gasoline market could be supply by industrializing 2,5% of the corn production** (23 million tons in 2007), or 14 % of the sorghum production (3,5 million tons in 2007).

Current View

- The **difference** of average prices between biofuels and fossil fuels **is still important**, and this is strengthened in Argentina due to the validity of politically managed prices for the latter
- The mandatory blend assures a market of 800,000 mt³ per year, equivalent to more than **824,000 tons of oil** (4,5 million tons of soybean)
- The development of biofuels, in general, and biodiesel, in particular, for the domestic Argentine market, is subject to the enforcement of the law. But **important additional tax incentives are required** (at least a figure equivalent to u\$s 0,30 per liter of biofuels – at current values)

CURRENT VIEW

- Strong export potential, with **10 million tons of soybean-oil** by 2010/11
- Actual Biodiesel policy in favor to export
- Due to actual export tax favorable to biodiesel “exports”

OPPORTUNITIES

Many of the most important oilseeds companies are in the Crushing business in Argentina and have projects of Biodiesel at a large scale.

- Vicentin-Glencore
- AGD-T6 (Bunge)
- Louis Dreyfus
- Glencore
- Molinos Rio

Oportunities in biotech

- Special soybean varieties with vegetable oils carrying more energy output. Linked with high quality protein in the other fraction. This is to introduce the idea than **using biodiesel you can improve food and human nutrition.**

¿Food or feed?

- **Who eats the grains?** People or pigs, chickens, poultries, steers, breweries, licours factories, etc
- For each MT extra of soybean oil, we shall bring to the market **4 MT** of soybean meal usede as food or feed

Adding value

- We still have **less poverty adding value, no destroying value added industries**
- **Biofuels** is an **opportunity** to introduce new ways to **add value** to the raw materials and local development



THANK YOU !