



# Sugar Cane Revolution... New Products

**ETHANOL SUMMIT**

Prof. Dr. Marcos Fava Neves

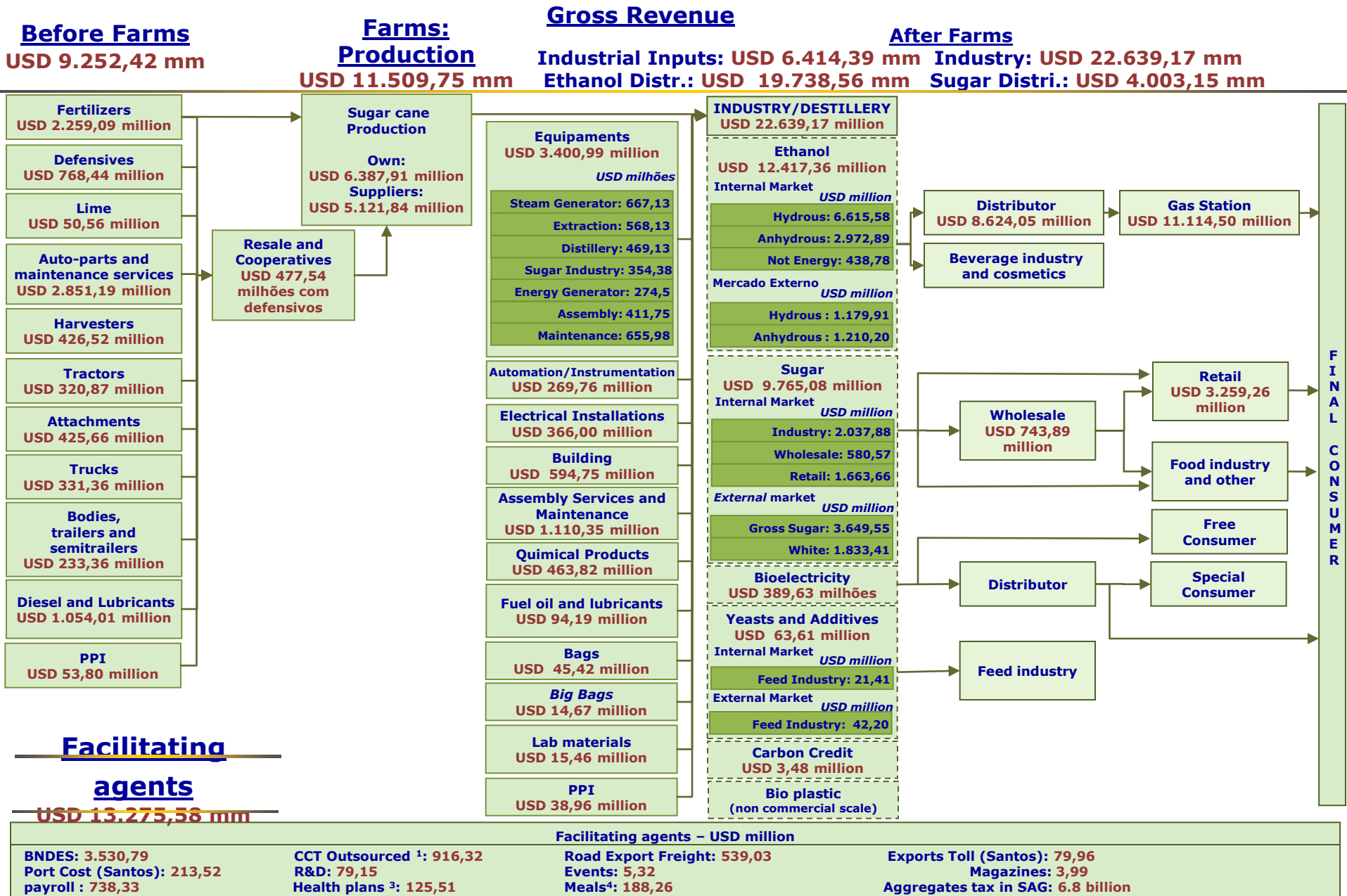
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Marketing e Estratégia da USP

- Why this panel is called the  
Sugar Cane Revolution?

# SUGAR-CANE CHAIN IN BRAZIL

**GDP in 2008: USD 28 billion; Financial Movement of the Chain in one year: US\$ 86 billion**



## Before Farms

USD 9.252,42 mm

- Fertilizers USD 2.259,09 million
- Defensives USD 768,44 million
- Lime USD 50,56 million
- Auto-parts and maintenance services USD 2.851,19 million
- Harvesters USD 426,52 million
- Tractors USD 320,87 million
- Attachments USD 425,66 million
- Trucks USD 331,36 million
- Bodies, trailers and semitrailers USD 233,36 million
- Diesel and Lubricants USD 1.054,01 million
- PPI USD 53,80 million

## Farms: Production

USD 11.509,75 mm

- Sugar cane Production
  - Own: USD 6.387,91 million
  - Suppliers: USD 5.121,84 million
- Resale and Cooperatives USD 477,54 milhões com defensivos

## Gross Revenue

Industrial Inputs: USD 6.414,39 mm  
Ethanol Distr.: USD 19.738,56 mm

- Equipaments USD 3.400,99 million USD milhões
  - Steam Generator: 667,13
  - Extraction: 568,13
  - Distillery: 469,13
  - Sugar Industry: 354,38
  - Energy Generator: 274,5
  - Assembly: 411,75
  - Maintenance: 655,98
- Automation/Instrumentation USD 269,76 million
- Electrical Installations USD 366,00 million
- Building USD 594,75 million
- Assembly Services and Maintenance USD 1.110,35 million
- Quimical Products USD 463,82 million
- Fuel oil and lubricants USD 94,19 million
- Bags USD 45,42 million
- Big Bags USD 14,67 million
- Lab materials USD 15,46 million
- PPI USD 38,96 million

## After Farms

- INDUSTRY/DESTILLERY USD 22.639,17 million
  - Ethanol USD 12.417,36 million
    - Internal Market USD million
      - Hydrous: 6.615,58
      - Anhydrous: 2.972,89
      - Not Energy: 438,78
    - Mercado Externo USD million
      - Hydrous : 1.179,91
      - Anhydrous : 1.210,20
  - Sugar USD 9.765,08 million
    - Internal Market USD million
      - Industry: 2.037,88
      - Wholesale: 580,57
      - Retail: 1.663,66
    - External market USD million
      - Gross Sugar: 3.649,55
      - White: 1.833,41
  - Bioelectricity USD 389,63 milhões
  - Yeasts and Additives USD 63,61 million
    - Internal Market USD million
      - Feed Industry: 21,41
    - External Market USD million
      - Feed Industry: 42,20
  - Carbon Credit USD 3,48 million
  - Bio plastic (non commercial scale)

- Distributor USD 8.624,05 million
  - Gas Station USD 11.114,50 million
  - Beverage industry and cosmetics
- Wholesale USD 743,89 million
  - Retail USD 3.259,26 million
  - Food industry and other
  - Free Consumer
  - Special Consumer
- Distributor
  - Feed industry

## Facilitating agents

USD 13.275,58 mm

### Facilitating agents – USD million

BNDES: 3.530,79	CCT Outsourced <sup>1</sup> : 916,32	Road Export Freight: 539,03	Exports Toll (Santos): 79,96
Port Cost (Santos): 213,52	R&D: 79,15	Events: 5,32	Magazines: 3,99
payroll : 738,33	Health plans <sup>3</sup> : 125,51	Meals <sup>4</sup> : 188,26	Aggregates tax in SAG: 6.8 billion

1- South Center region. 2- Exports by Portos de Santos e Paranaguá. 3 e 4 – Only São Paulo state.

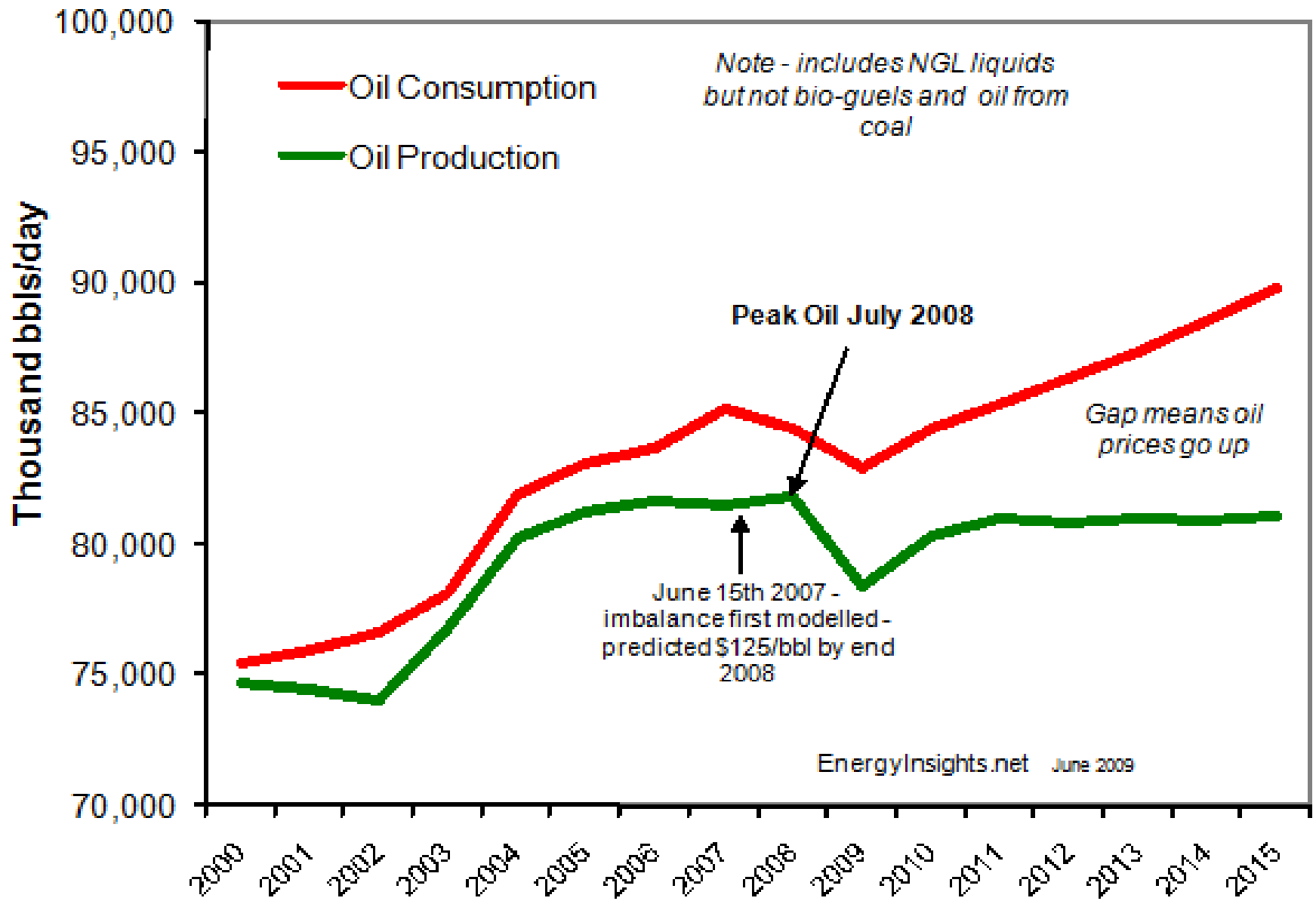
# What is happening with oil?







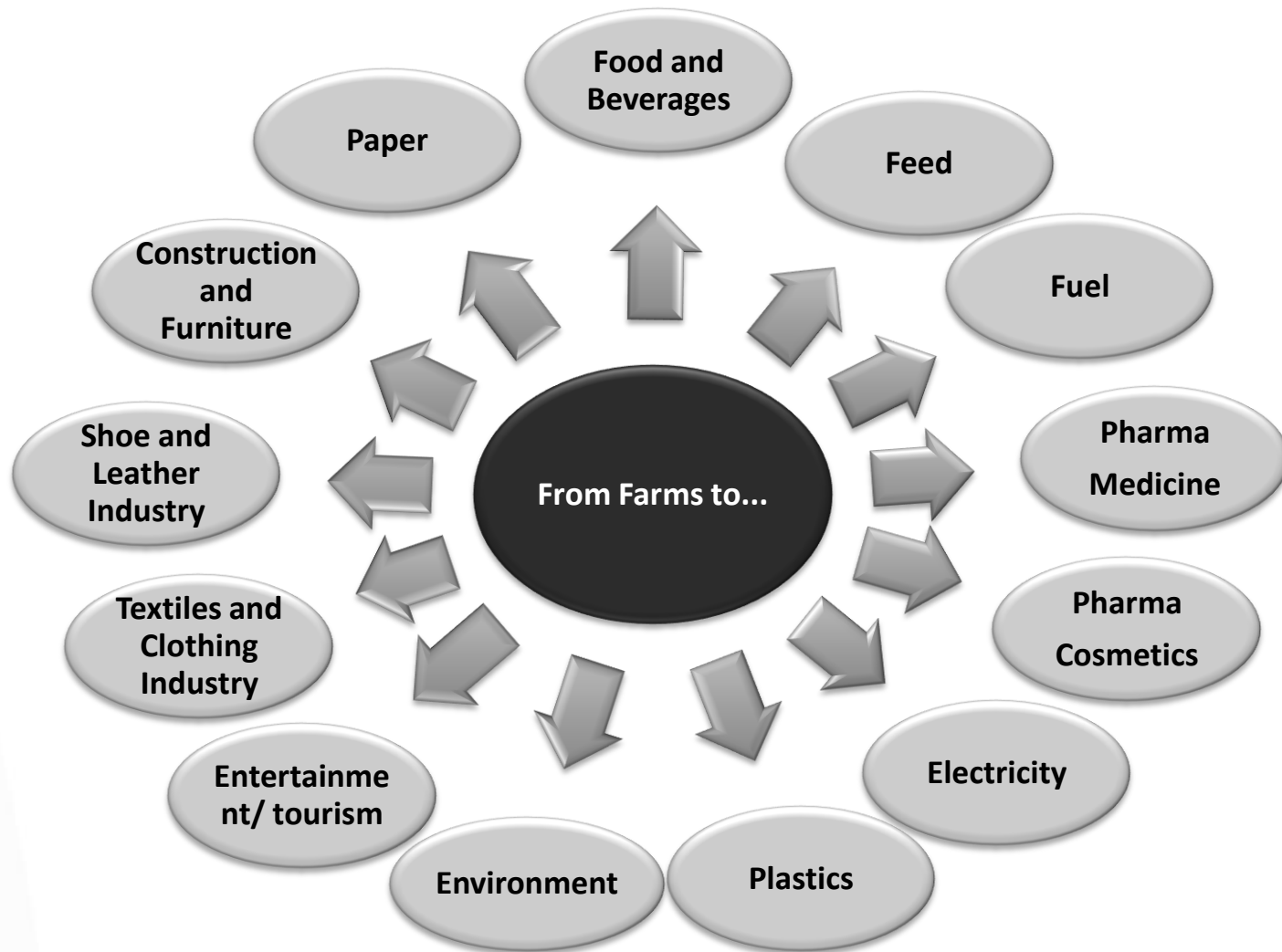
# Oil Consumption and Production Forecast - World



- So... what happens when oil prices go up?



# The Bio...Everything is coming from the farm!



BRASIL  
**Coca-Cola**  
VIVA POSITIVAMENTE

Ontem fui planta,  
hoje sou PET.



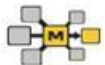
BR

A Coca-Cola Brasil inova com a Plant Bottle™. Uma embalagem até 30% à base de cana-de-açúcar, uma fonte renovável, ou seja, diminui a dependência do petróleo e emite menos CO<sub>2</sub>, além de ser 100% reciclável. Um grande passo rumo à geração do futuro para você matar a sede de ajudar o mundo.

Saiba mais em  
[www.cocacolatbrasil.com.br](http://www.cocacolatbrasil.com.br)



Contém até 30% de PET originário de cana de açúcar.  
Garrafa 100% reciclável.



**MARKESTRAT**

- And locally, what happened?

- The Tsunami Flex...



**USP**

  
**MARKESTRAT**

This year... more 3,4 million consumers...

FENABRIVE

INFORMATIVO

2011

RESUMO MENSAL ABRIL 2011

SEGMENTO	2011	2011	ACUMUL.	2010		Previsão MB	
	Abr (A)	Mar (B)	2011 (C)	Abr (D)	ACUMUL. (E)	Abr 2011	Acumulado 2011
a) Autos	211.887	224.119	818.733	208.917	813.456	217.787	2.713.126
b) Com. Leves	61.036	64.630	231.908	52.982	198.947	55.638	755.870
<b>(a + b)</b>	<b>272.923</b>	<b>288.749</b>	<b>1.050.641</b>	<b>261.899</b>	<b>1.012.403</b>	<b>273.425</b>	<b>3.468.996</b>



## 84% of the new consumers are Flex Fuel Cars...

<b>Autos + Com. Leves</b>	<b>Fevereiro/2011</b>	<b>Março/2011</b>	<b>Abril/2011</b>	<b>Total</b>
<b>Flex</b>	220.305	244.260	227.138	884.990
<b>Demais</b>	38.517	44.489	45.786	165.652
<b>Total</b>	<b>258.822</b>	<b>288.749</b>	<b>272.924</b>	<b>1.050.642</b>

<b>Autos + Com. Leves</b>	<b>Fevereiro/2011</b>	<b>Março/2011</b>	<b>Abril/2011</b>	<b>Total</b>
<b>Flex</b>	85,12%	84,59%	83,22%	84,23%
<b>Demais</b>	14,88%	15,41%	16,78%	15,77%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

# With 2 million new cars/year, we need 143 new mills till 2020

ANO EM CONSIDERAÇÃO	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Frota Automóveis flex fuel (unidades)	12,500,000	15,500,000	17,500,000	19,500,000	21,500,000	23,500,000	25,500,000	27,500,000	29,500,000	31,500,000	33,500,000
Consumo Potencial Hidratado (litros)	20,000,000,000	24,800,000,000	28,000,000,000	31,200,000,000	34,400,000,000	37,600,000,000	40,800,000,000	44,000,000,000	47,200,000,000	50,400,000,000	53,600,000,000
Faturamento Total com Hidratado (R\$)	34,000,000,000	42,160,000,000	47,600,000,000	53,040,000,000	58,480,000,000	63,920,000,000	69,360,000,000	74,800,000,000	80,240,000,000	85,680,000,000	91,120,000,000
Deficit de litros de hidratado	5,000,000,000	9,800,000,000	13,000,000,000	16,200,000,000	19,400,000,000	22,600,000,000	25,800,000,000	29,000,000,000	32,200,000,000	35,400,000,000	38,600,000,000
Faturamento que se deixa de ter	8,500,000,000	16,660,000,000	22,100,000,000	27,540,000,000	32,980,000,000	38,420,000,000	43,860,000,000	49,300,000,000	54,740,000,000	60,180,000,000	65,620,000,000
Hectares necessários de cana para hidrat.	2,614,379	3,241,830	3,660,131	4,078,431	4,496,732	4,915,033	5,333,333	5,751,634	6,169,935	6,588,235	7,006,536
Hectares em falta	653,595	1,281,046	1,699,346	2,117,647	2,535,948	2,954,248	3,372,549	3,790,850	4,209,150	4,627,451	5,045,752
Toneladas necessárias de cana para o total	222,222,222	275,555,556	311,111,111	346,666,667	382,222,222	417,777,778	453,333,333	488,888,889	524,444,444	560,000,000	595,555,556
Toneladas de cana em falta (potencial)	55,555,556	108,888,889	144,444,444	180,000,000	215,555,556	251,111,111	286,666,667	322,222,222	357,777,778	393,333,333	428,888,889
Usinas necessárias para o potencial	74	92	104	116	127	139	151	163	175	187	199
Usinas adicionais necessárias	19	36	48	60	72	84	96	107	119	131	143
Valor a ser investido em Usinas (US\$)	8,055,555,556	15,788,888,889	20,944,444,444	26,100,000,000	31,255,555,556	36,411,111,111	41,566,666,667	46,722,222,222	51,877,777,778	57,033,333,333	62,188,888,889
Fonte: Prof. Marcos Fava Neves											

INDICADORES UTILIZADOS		
1 usina produz (so hidratado)	270,000,000	milhões de litros por ano
1 tonelada de cana produz	90	litros hidratado
1 ha produz	7,650	litros hidratado
1 ha produz	85	toneladas de cana
1 carro flex consome	1,600	litros de hidratado/ano
1 Carro Flex consome	4.38	litros/dia
Preço do litro no posto	1.70	R\$
Acrescimento anual de carros flex	2,000,000	unidades
Produção atual de hidratado em litros	15,000,000,000	bilhões de litros
Tamanho da Usina	3,000,000	milhoes de toneladas de cana
Investimento para uma Usina nova (hidrat)	145	US\$/tonelada de cana, sendo aprox

- So... Mr. James Pessoa, Mr. John Melo, Mr. Lee Edwards and Mr. John Ingham... You are developing other uses for sugar cane and ethanol...
  - We are curious to see...

- But be patient... Lets call first Mr. Antonio Guimarães, because... we need cane, and... **“to bring plant potential to life”!**