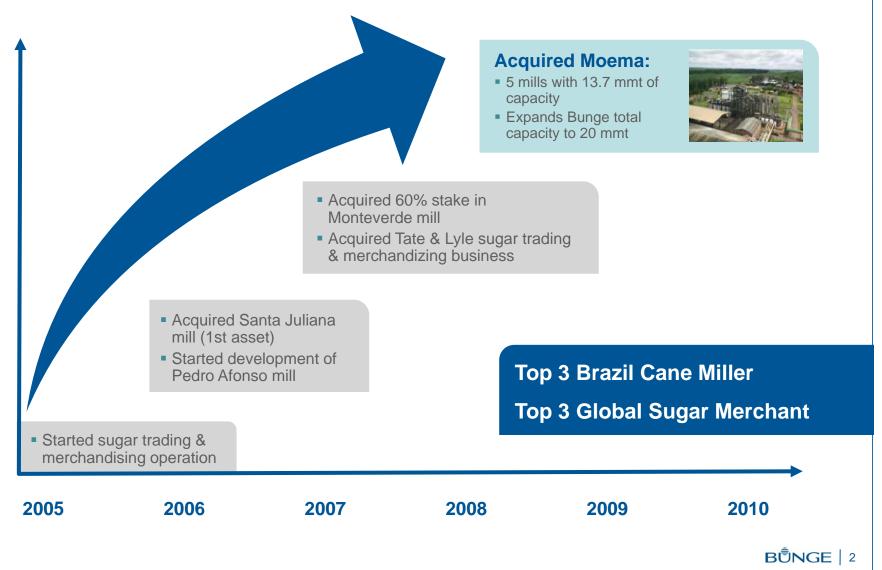


# Sugar & Bioenergy Ben Pearcy Managing Director, Sugar & Bioenergy and Chief Development Officer, Bunge Limited September 23, 2010

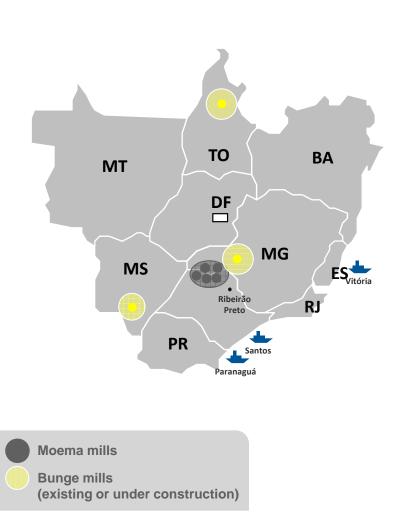
## Profile

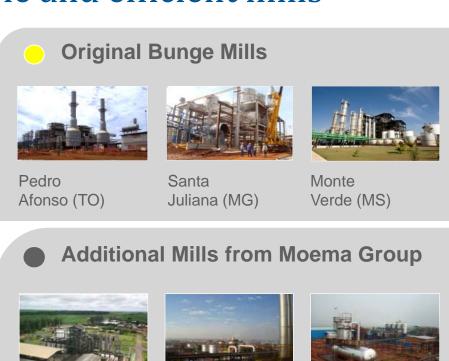


## We are building the business through a combination of greenfield investment and acquisition



## Bunge has established a strong production base in Brazil with modern, flexible and efficient mills





Moema (SP)



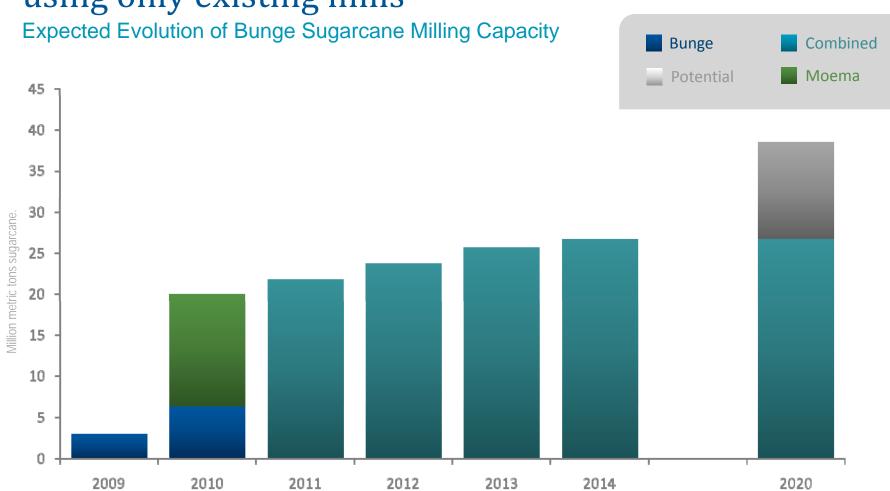


Guariroba (SP)

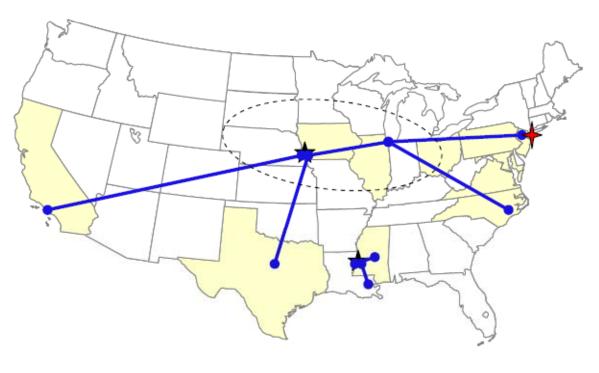
Note: Map not drawn to scale.

Ouroeste (SP)





## Bunge has investments in two U.S. corn ethanol plants, with strong distribution networks



- ★ Ethanol Plant
- + Throughput facility

Bunge produces 480m liters of ethanol in the US

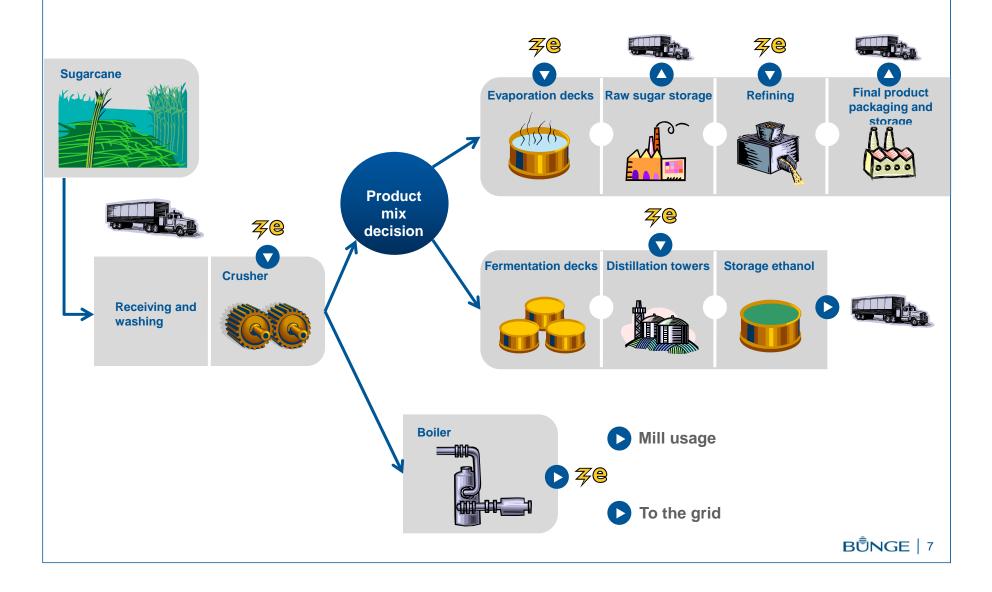




### Markets

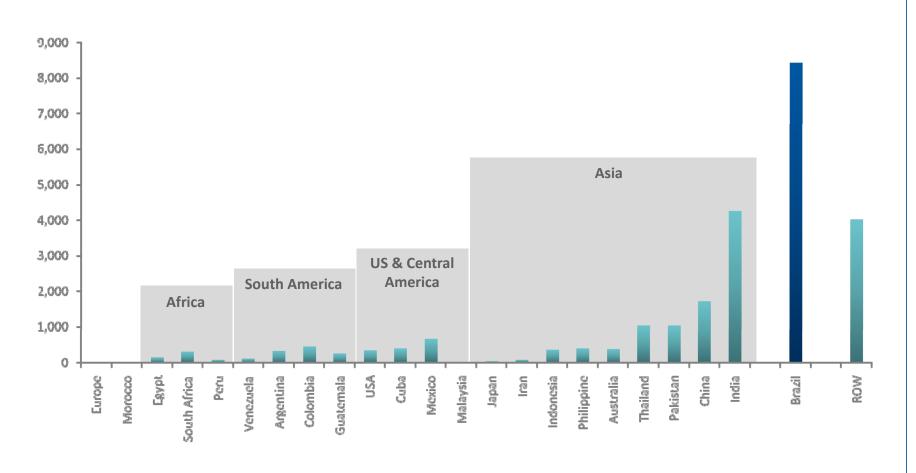


## Sugarcane milling generates not just sugar, but three principal outputs: **sugar, ethanol, and power**



## As a result, Brazil has become the dominant global sugarcane producer

Sugaracane planted area – Harvest 09/10\* ('000 ha)



Source: FAPRI 2010 Agronomical Outlook

\*Areas projected for this harvest

Sugarcane industry has solid fundamental demand and potentially significant longer-term upside as a renewable energy source

#### **Today**

## Market: Brazilian power (cogeneration)

 Strong demand and attractive pricing

## Market: Brazilian ethanol (flex-fuel)

 Very strong mid-term growth trends (8%+ pa)

#### **Market: International Sugar**

- Strong underlying growth trends
- Brazil the low-cost supplier
- Expanding global trade

#### **Potential**

#### **Market: Industrial biotech**

- Biomaterials (e.g. PET...)
- Significant new demand for Brazilian cane
- Timeframe: Beyond 2012

#### **Market: Advanced fuels**

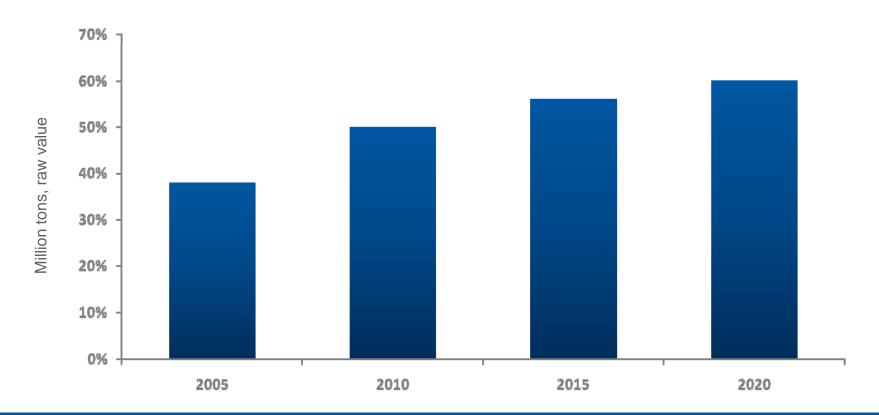
- Biodiesel (EU), kerosene, butanol...
- Significant new demand for Brazilian cane
- Timeframe: Beyond 2012

#### **Market: International ethanol**

- E.g., US RFS (Renewable Fuel Standard)
- Significant new demand for Brazilian ethanol
- Timeframe: Beyond 2012

### Brazil is the leading exporter of sugar and is expected to increase its share as global demand grows

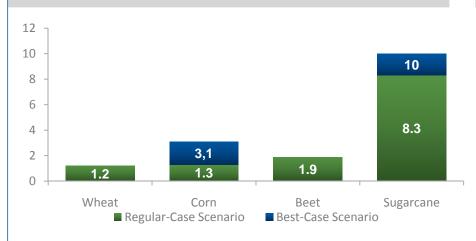
Brazil Sugar Exports as a Percentage of Global Trade



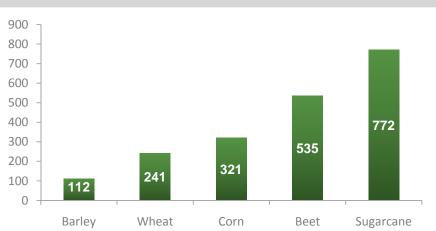
Brazil produces about 20% of world's sugar, but accounts for close to 50% of exports today. This is forecast to increase to 60% by 2020.

### Sugarcane has favourable characteristics as a renewable energy source

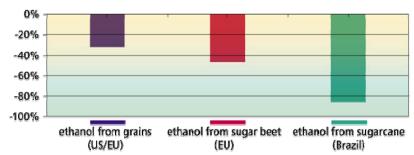
#### **Energetic Return – (Input – Output)**



#### **Ethanol Production (10x liters/ha)**



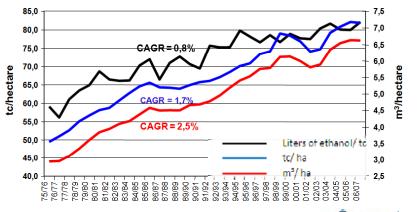
#### **Greenhouse Gas Balance on Life Cycle Basis**



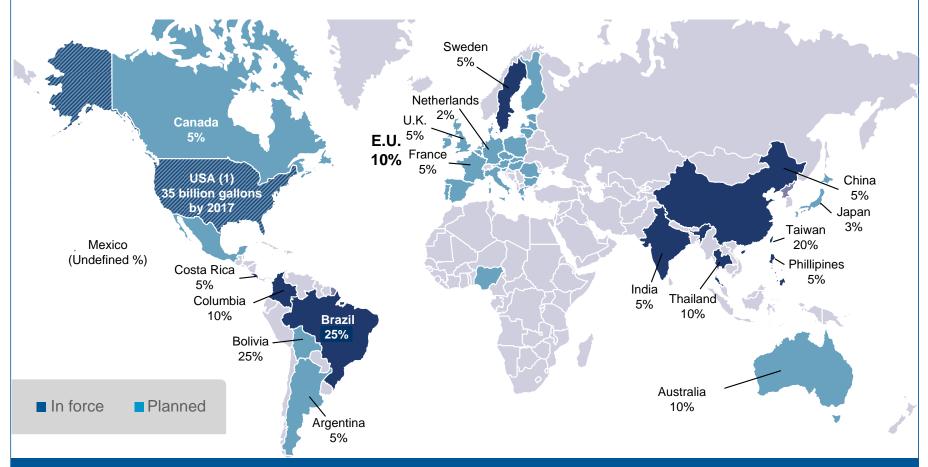
Note: Reductions in well-to-wheel CO2-equivalent GHG emissions per km. from bioethanol compared to gasoline, calculated on a life-cycle basis.

Source: IEA - International Energy Agency (2004). Data compiled: by Icone and Unica.

#### **Historical Productivity Increase**



## Ethanol markets are largely domestic today; however, growth in exports could become a future opportunity

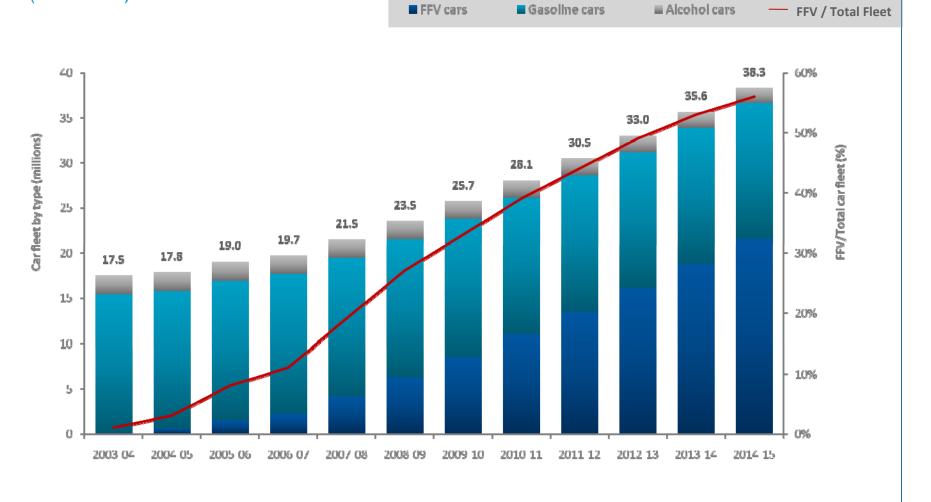


Countries representing approximately 80% of global petroleum demand are introducing blending targets

## The Brazilian flex-fuel fleet has gained critical mass faster than expected

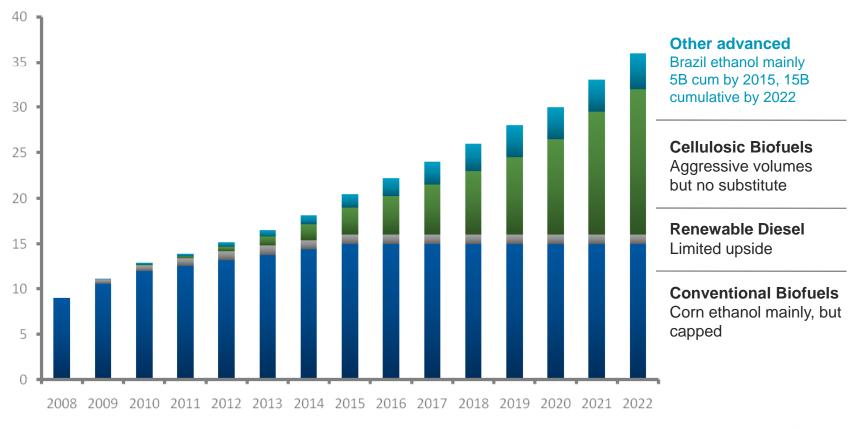
Brazilian vehicle fleet projections by fuel type





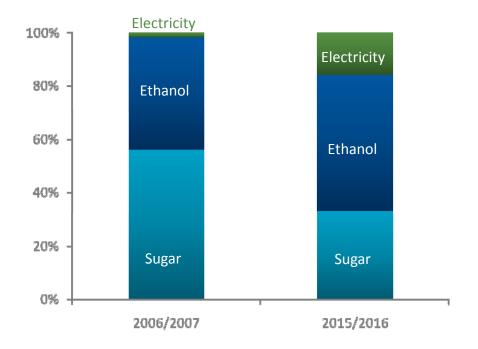
### Based on today's commercial options, ethanol from sugarcane is well positioned to fulfil US RFS2 advanced fuel mandate

US Renewable Fuels Standards 2 (Billions of Gallons)



### Co-generation is expected to become an important source of revenues for millers

Revenue mix of average sugar mill



- Mills provide electricity during dry season when reservoirs from hydropower plants are low
- Energy is sold directly to large customers or at auctions to power companies
- Provides cash flow stability
  - EBITDA margins in 80-90% range
  - Over time could provide between 15-20% revenue contribution
- High initial capital cost to install generation equipment and transmission lines to grid

Milling 4 mmt of cane can produce electricity equivalent to consumption of a Brazilian city of 300,000 inhabitants

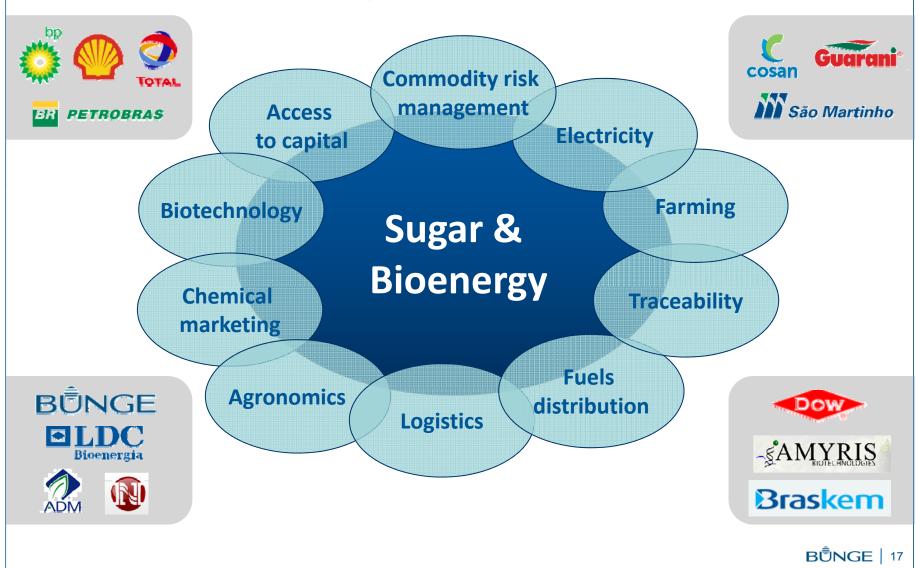
Note: Consumption figures assumes Brazlian parameters and 200 day crush season Source: UNICA

## Industry experts expect a strong combined pull for Brazilian sugarcane in the next decade

Forecast		
Sugarcane production (million t)		
Sugar (million t)		
Domestic Market and Stocks		
Surplus Export		
Ethanol (billion I)		
Domestic Market and Stocks		
Surplus Export		
Cogeneration (MW avg)		

UNICA (Apr 2010)			
2009/10	2015/16	2020/21	
598	829	1,038	
33	41	45	
9	11	12	
24	30	33	
26	47	65	
22	35	50	
3	12	16	
1,800	11,500	14,400	

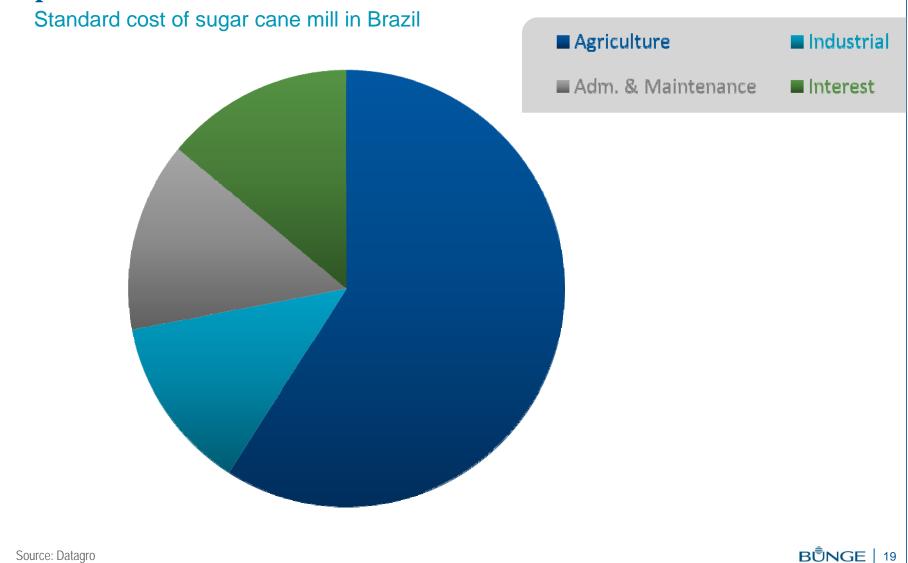
## Accelerating interest in cane from a wide range of industries and players



## **Key Success Factors**



Agricultural operations represent the largest part of a Brazilian millers costs



### Sourcing decision: own cane versus third party

#### **Third Party Cane**

#### **Pros**

- Consecana pricing provides hedge against lower prices
- Lower capital employed in agriculture
- Lower operational complexity

#### Cons

- Risk of raw material shortage
- Limits upside at times of high prices
- Constrains forward hedging as supply cost not known
- Growers prefer to deliver at peak TRS slot (July-Sep)

#### **Own Cane**

#### **Pros**

- Guaranteed supply
- Allows forward hedge at time of high prices
- Yield improvement and mechanization
- Optimizes mill utilization by integrated planning

#### Cons

- Higher capital employed
- Agricultural operational risk
- Higher exposure to low product prices

In 2011, Bunge expects to source about 35% third party cane and 65% own cane

## In Brazil, scale is a key source of advantage at the cluster and industry level

#### **Benefits of Scale in Clusters**

#### **Lower Cane cost**

Optimization of cane sourcing across multiple mills

#### **Fixed costs savings**

Main mill has shared service center

#### **Lower capital costs**

 Shared sugar and ethanol storage and transmission lines

#### **Benefits of Scale in industry**

#### **Logistics network efficiency**

- Road/rail transhipment
- Pipelines
- Port facilities

## Marketing leverage as a reliable supplier

#### **Input purchases**

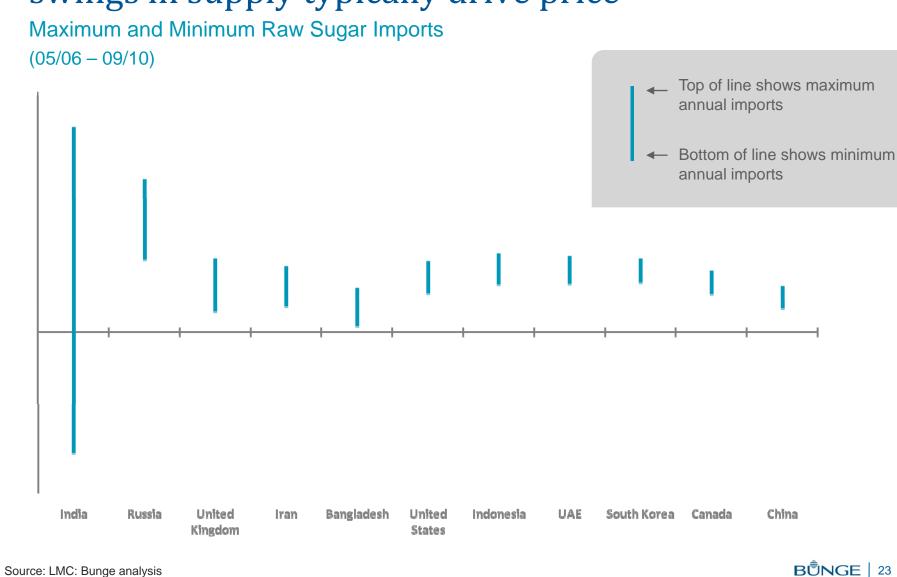
- Fertilizer
- Equipment

#### **Technology alliances**

## Product marketing and risk management

	Marketing	Risk Management
Sugar	<ul> <li>VHP* raw sugar for export typically sold FOB to trade houses under frame contracts</li> <li>Crystal sugar sold to domestic food manufacturers under frame contracts</li> </ul>	<ul> <li>Future sales can be hedged via NY#11 market</li> <li>Brazil a delivery point for NY#11</li> <li>Trade houses also provide forward pricing tools</li> </ul>
Ethanol	<ul> <li>Ethanol sold ex-mill to fuel distributors on monthly basis under frame contracts</li> <li>Exports sold FOB to trade houses on opportunistic basis</li> </ul>	<ul> <li>Mostly spot pricing linked to local ESALQ index</li> <li>Emerging futures market in Sao Paulo</li> <li>Storage used to capture intercrop premiums</li> </ul>
Electricity	<ul> <li>Electricity sold under very long-term contracts</li> <li>Government auctions for "new energy" with 10 year timeframe</li> <li>Surplus sold spot</li> </ul>	<ul> <li>Long-term contracts at inflation adjusted price in R\$</li> <li>Spot market very volatile</li> </ul>

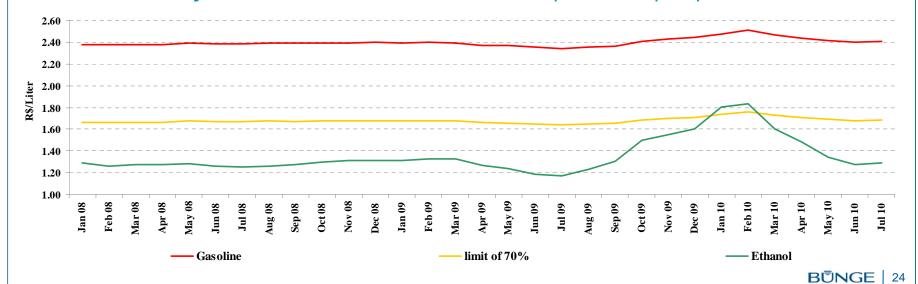
## Sugar demand is relatively stable; swings in supply typically drive price



## Domestic ethanol trades basis gasoline prices at the pump in Brazil

- The Brazilian government has held gasoline prices stable in local currency since September 2005 despite volatility in global prices
- Ethanol has 70% of the energy content of gasoline
- Ethanol must be priced below 70% to attract demand
- Actual ethanol price reflects balance of capacity and demand
- Growing flex-fuel demand base likely to move ethanol closer to 70% level over time

#### Gasoline and Hydrous Ethanol Price evolution: R\$ per liter at pump in SP State



## Sugar and ethanol are correlated but decouple frequently creating opportunities for flexible millers

Sugar and ethanol prices (2003 – June 2010)

in ¢US\$/Lb equivalents



Source: Esalq, Ice and Bunge

### Not only do Bunge's mills source significant own cane, they are also flexible, mechanized and have significant co-gen

## 8 Mills in 4 states with high growth potential

- 3 Mills in Sao Paulo State: Moema, Guariroba, Ouroeste
- 3 Mills in Minas Gerais: Santa Juliana, Frutal, Itapagipe
- Other: Monteverde in Mato Grosso de Sul; Pedro Afonso in Tocantins
- 2011 Capacity: 21.8M mtpa; Crush: 19M mtpa
- Expansion potential: ~40M mtpa

## Secure, efficient cane access

- Own cane: 65% one of the highest in the industry
- Total cane managed: ~200,000 ha
- Mechanized harvest: ~90%

## Flexible product output

- 2011 sugar production ~1M mtpa; Ethanol production ~1M m3
- 2011 anticipated output: ~40% sugar; ~60% ethanol
- Swing capacity: 10% of capacity
- Co-gen capacity: ~60MW; Co-gen sales: ~360,000 MWh

## Strategy



### Strategic Objectives

Build top 3 position in Brazilian cane milling industry

Brazilian cane will be the low cost winner

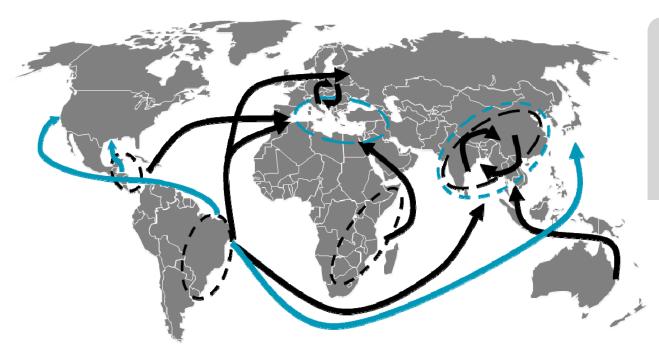
Build top 3 position in global sugar and ethanol trading & merchandising

Develop integrated global value chain supported by selected upstream and downstream investments outside Brazil

Leverage Bunge's global network

Build global relationships with technology providers and fuel/chemical industry

### Leading players will be global





Consumption growth



Fastest production growth



Sugar flows



Ethanol flows

#### **Business model of leading sugar player**

- Global footprint
- Low cost production assets
- Meaningful share of global trade
- Integrated value chain
- Robust risk management

#### Conclusion

- This is an industry with extremely strong fundamentals in both growth and upside potential
- Brazil is the clear economic winner in cane production
- Value chain is complex and sophisticated, risk management is essential plays to Bunge's core skills and allows us to build competitive advantage
- Agriculture is a key value driver and requires new capabilities, which we are developing
- Flex-fuel and the global drive for renewable fuels was an inflexion point in the Brazilian cane industry
- Technology may cause additional inflexion points and players need to be positioned to adapt and leverage new opportunities



Thank you.