8 April 2014
4th Annual Kingsman EU Sugar Seminar

Sugar and Ethanol – An Agenda for the Future

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International Sugar Organization
Structure of Presentation

The World Sugar Market
The Sugar Market in 2013/14
Key producers and consumers
Long-Term Outlook by Region to 2020

The World Ethanol Market
The US Market vs. Brazil and the Rest of the World
World Outlook to 2020
Bioproducts to Boost Future Demand for Ethanol?

Conclusions
4- Year World Surplus Weighing on Sugar Prices

- The accumulated world sugar surplus over 4 seasons means the global stocks to consumption ratio will remain above 40% for at least another year.
World Sugar Prices Falling as Stocks are Replenished

World Sugar Market under pressure in 2013/14:

1) 4\textsuperscript{th} consecutive surplus;
2) Good crops in Brazil and India
3) Lower Import Demand
4) Record export availability
Brazil: Sugar and Ethanol in 2013/14 and 2014/15
(Sugar in mln tonnes, raw value; ethanol in bln litres)
April/ March

<table>
<thead>
<tr>
<th>Year</th>
<th>Sugar Production</th>
<th>Sugar Exports</th>
<th>Ethanol Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>39.5</td>
<td>28.6</td>
<td>28.0</td>
</tr>
<tr>
<td>2011</td>
<td>37.2</td>
<td>25.8</td>
<td>22.7</td>
</tr>
<tr>
<td>2012/13</td>
<td>40.0</td>
<td>28.2</td>
<td>23.5</td>
</tr>
<tr>
<td>2013/14 (f)</td>
<td>39.0</td>
<td>28.0</td>
<td>27.5</td>
</tr>
<tr>
<td>2014/15 (f)</td>
<td>39.5</td>
<td>28.0</td>
<td>27.5</td>
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</tbody>
</table>
What to Expect from India in 2013/14?

Sugar Production in India, mln tonnes, raw value

Lower sugar prices in India leading to a small fall in production in 2013/14
How about Thailand?

Sugar Production in Thailand, mln tonnes, raw value

The world’s second largest sugar exporter has been on an aggressive expansion path. Could output break the 11 mln tonne mark?
Higher Prices in Importers like EU, China and Russia preventing large drops in domestic output
World Sugar Production and Consumption
2012/13 – 2014/15(f)

- Consumption to continue to rise by around 2% a year

Production
Consumption
Asia Will Remain the Engine of Sugar Consumption Growth

Indian Subcontinent and Far East’s share in global consumption: 1984: 25% and in 2012/13: 41% (this will rise to 47% in 2020)
China’s Future Revival as an Importer: More room for sugar refining?

Net sugar imports by China

0 1 2 3 4 5 6 7 mln t, raw value

Climate Change and Sugar Crops (MECAS(13)07)
Tackling Climate Change Impact

- El Niño/La Niña increase yield variability by 20%.

- Improved crop efficiency needed through adaptation and mitigation for cane producers.

- Beet producers have an advantage: focus only on mitigation.
Prospects for the EU-28

Sugar beet yields could rise further and abolishing sugar quotas may mean larger output in the EU-28, by as much as 2 mln tonnes.

Isoglucose production may also rise from the current 670 thousand tonnes to perhaps over 2 mln tonnes.

As a result, sugar prices and imports could fall.
The Ethanol Market in 2014 and Beyond
Global Fuel Ethanol Production in 2014

- World Output forecast to rise to match previous record

- **2014** output
  - **World**: 90.6 bln litres
  - **US**: 51.8 bln litres
  - **Brazil**: 25.5 bln litres
  - **Others**: 13.3 bln litres
Among other producers, EU already had record output in 2013; strong growth for Thailand and Argentina in both 2013 and 2014.
In other countries: FDI and blend mandates should encourage ethanol output growth

<table>
<thead>
<tr>
<th>Country</th>
<th>Blend %</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peru, Uruguay</td>
<td>E8</td>
<td>2011</td>
</tr>
<tr>
<td>Bolivia</td>
<td>E10</td>
<td>2010</td>
</tr>
<tr>
<td>Canada</td>
<td>E-5</td>
<td>2008</td>
</tr>
<tr>
<td>China</td>
<td>E-5</td>
<td>2008</td>
</tr>
<tr>
<td>Colombia</td>
<td>E-10</td>
<td>2008</td>
</tr>
<tr>
<td>Dominican Rep.</td>
<td>E-7.5</td>
<td>authorised</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>E-5</td>
<td>2009</td>
</tr>
<tr>
<td>India</td>
<td>E-5</td>
<td>In 17 of 25 states</td>
</tr>
<tr>
<td>Indonesia</td>
<td>E-10</td>
<td>2009</td>
</tr>
<tr>
<td>Jamaica</td>
<td>E-10</td>
<td>2009</td>
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<tr>
<td>Kenya</td>
<td>E-10</td>
<td>2010</td>
</tr>
<tr>
<td>Malaysia</td>
<td>E-5</td>
<td>2010</td>
</tr>
<tr>
<td>Mexico</td>
<td>E-5</td>
<td>2012</td>
</tr>
<tr>
<td>Paraguay</td>
<td>E-25</td>
<td>2010</td>
</tr>
<tr>
<td>Philippines</td>
<td>E-5</td>
<td>2009</td>
</tr>
<tr>
<td>Vietnam</td>
<td>E-5</td>
<td>2009</td>
</tr>
</tbody>
</table>
Global Fuel Ethanol Demand to 2020

Top consumers of Fuel Ethanol

- United States – 88 bln litres (RFS2)
- Brazil – 35 bln litres
- EU (28) – 11 bln litres
- China – 8 bln litres
- Others – 25 bln litres

World Total – 167 bln litres – Up 90% from today’s level, in part counting on success of second generation ethanol demand in the US.
Global Production Capacity of Bioplastics

- The equivalent to 6 mln tonnes of sugar to be diverted to bioplastics production from ethanol in Brazil alone by 2020, making ethanol is a bullish driver over the long run. Thailand and India also promising markets.

Source: European Bioplastics
Conclusions — World Sugar

**Bearish** World Sugar Market *fundamentals in 2014*

Surplus to persist in 2013/14 (+4.2 mln tonnes);
1) Lower import demand vs record export availability
2) Fairly high production levels across key importers
3) Brazil’s weaker currency boosting exports

Longer-term, the world needs more sugar — **an additional** 20 mln tonnes to **2020. 60% of world consumption growth** to take place in **Asia**. China to become the second largest consumer and largest importer.
Conclusions — Ethanol

• **World record output** for fuel ethanol in 2014.

• The equivalent of **6 mln tonnes of sugar to be diverted to bioplastics production from ethanol in Brazil alone** by 2020

• **World fuel ethanol demand/supply** to grow by 90% **to 167 bln litres by 2020**, giving a long-term bullish flavour to the market.
Thank you

8th ISO/Datagro – Sugar and Ethanol Conference 2014
New York
“Main Aspects of a Market Under Pressure“
14 May 2014

23rd ISO Seminar–
London
“Sugar and Ethanol: Fresh Options“
25-26 November 2014

www.isosugar.org