Fuel Ethanol in Japan

XII JAPAN-BRAZIL Joint Economic Committee Meeting
CNI - Nippon Keidanren
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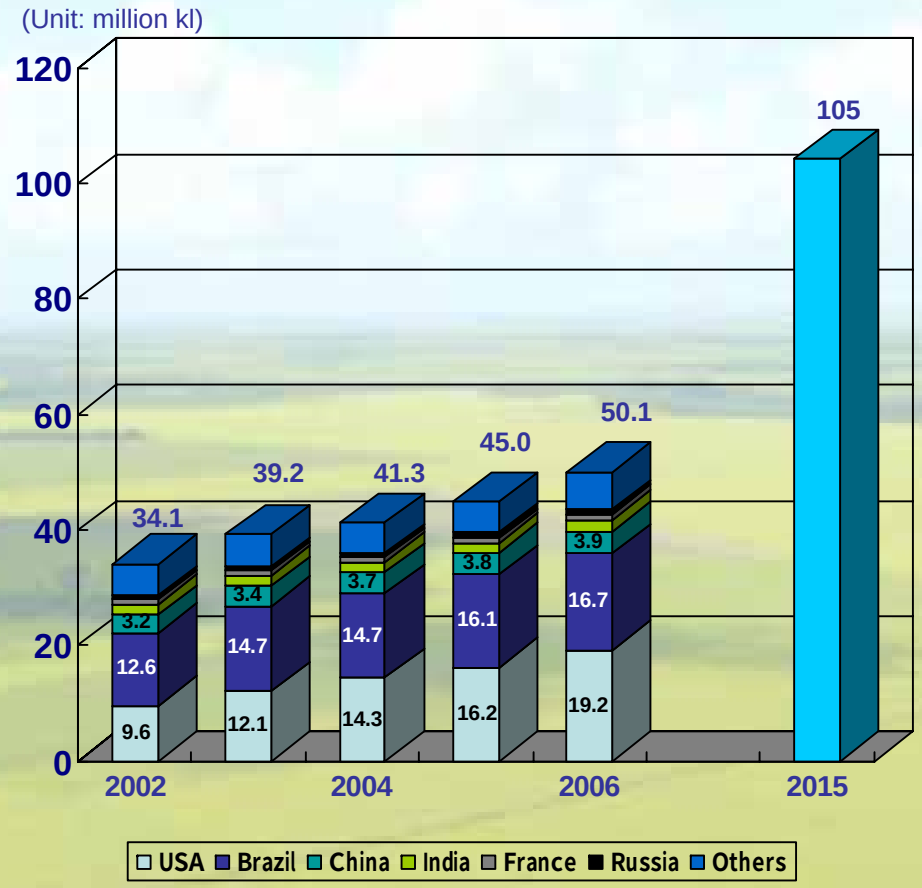
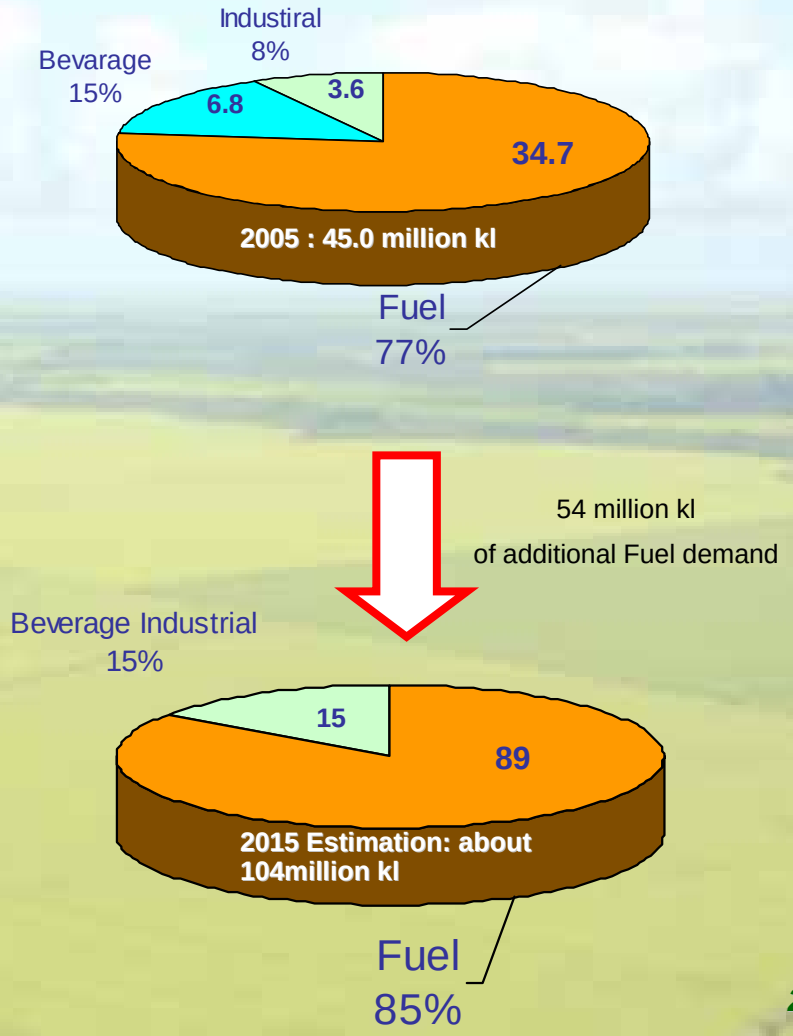
World Ethanol Production, Share by Application

Production/Estimation

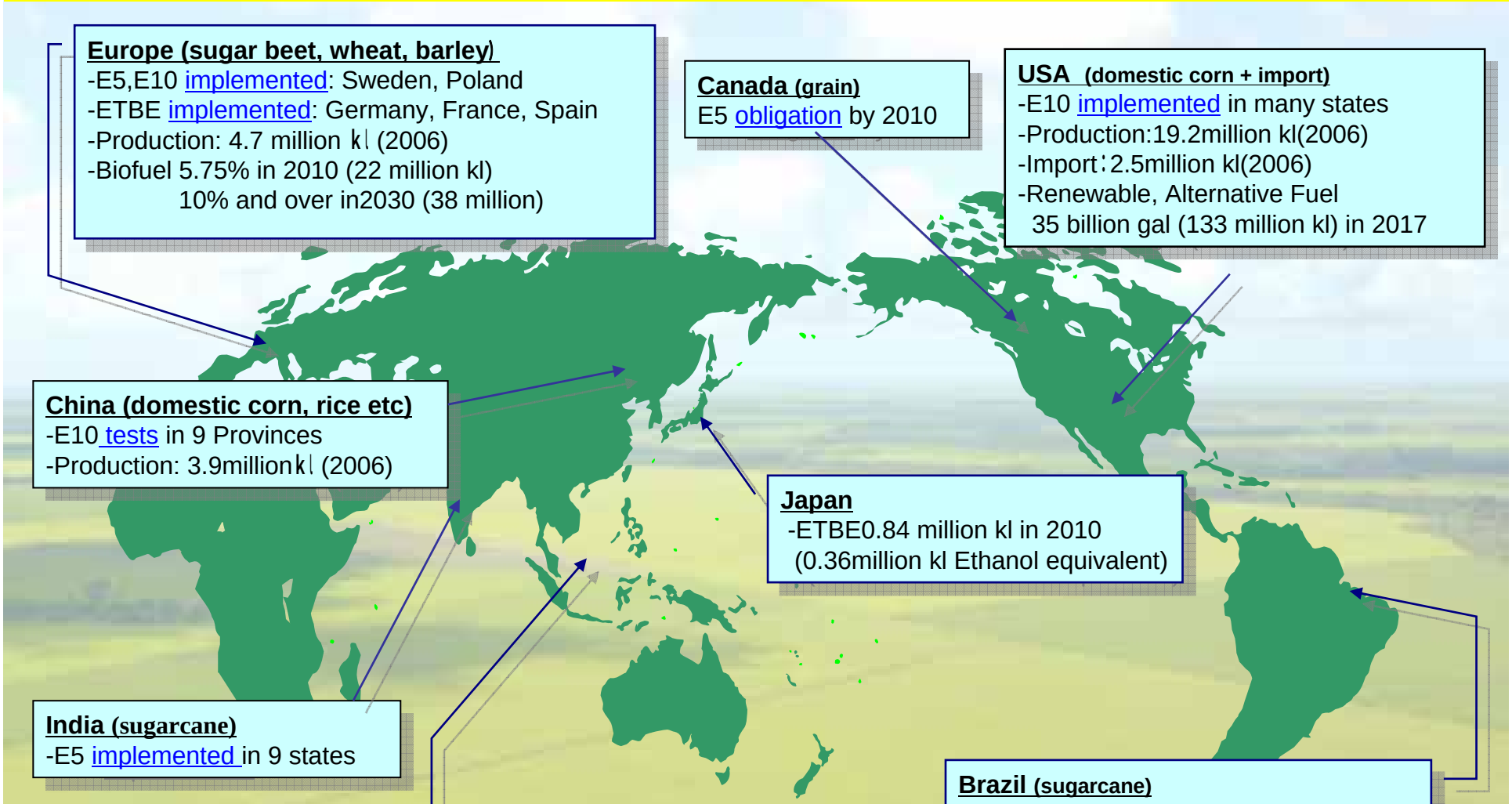


Source：Estimation / F.O.Licht

Share by Application



Use of Fuel Ethanol in the World



Europe (sugar beet, wheat, barley)
-E5,E10 implemented: Sweden, Poland
-ETBE implemented: Germany, France, Spain
-Production: 4.7 million kl (2006)
-Biofuel 5.75% in 2010 (22 million kl)
10% and over in2030 (38 million)

Canada (grain)
E5 obligation by 2010

USA (domestic corn + import)
-E10 implemented in many states
-Production:19.2million kl(2006)
-Import：2.5million kl(2006)
-Renewable, Alternative Fuel
35 billion gal (133 million kl) in 2017

China (domestic corn, rice etc)
-E10 tests in 9 Provinces
-Production: 3.9million kl (2006)

Japan
-ETBE0.84 million kl in 2010
(0.36million kl Ethanol equivalent)

India (sugarcane)
-E5 implemented in 9 states

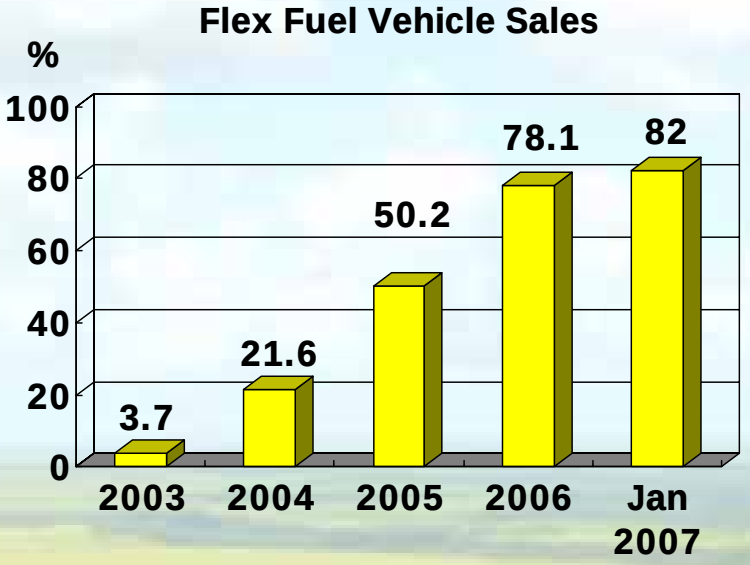
Philippine (sugarcane, Molasses)
-E5 Obligation from 2009

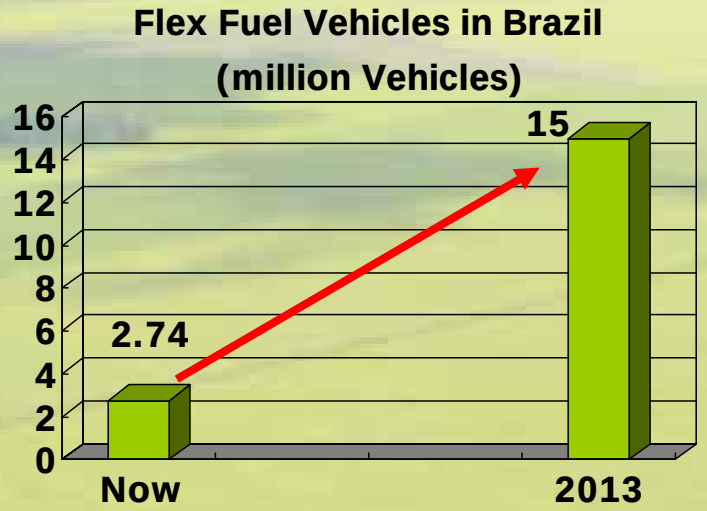
Thailand (cassava, molasses)
-E10 Obligation by 2007

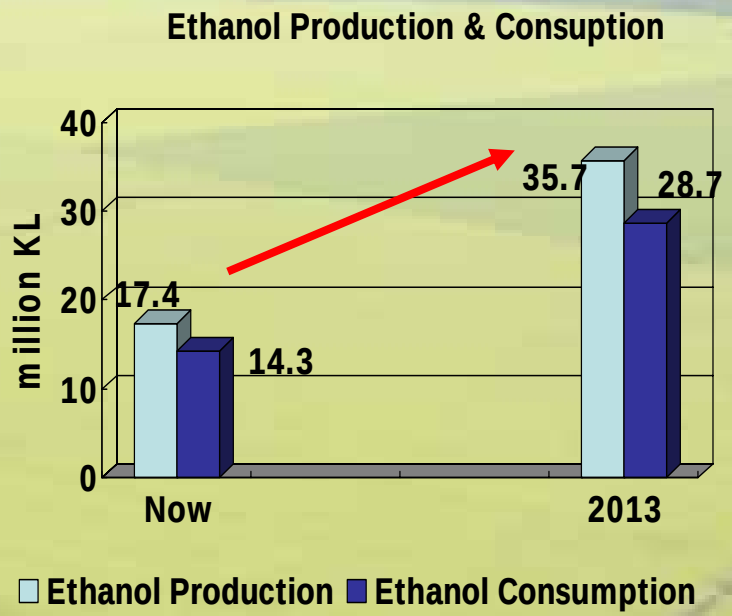
Brazil (sugarcane)
-E20-25、E100 (FFV) Implemented
-Production:16.7million kl (2007)
-Export : 3.0 million kl (2006)

E3: 3% Ethanol Blended Gasoline
E10: 10%Ethanol Blended Gasoline
ETBE: Ethyl Tertiary Butyl Ether

Ethanol Production & Consumption in Brazil







Source: ANFAVEA

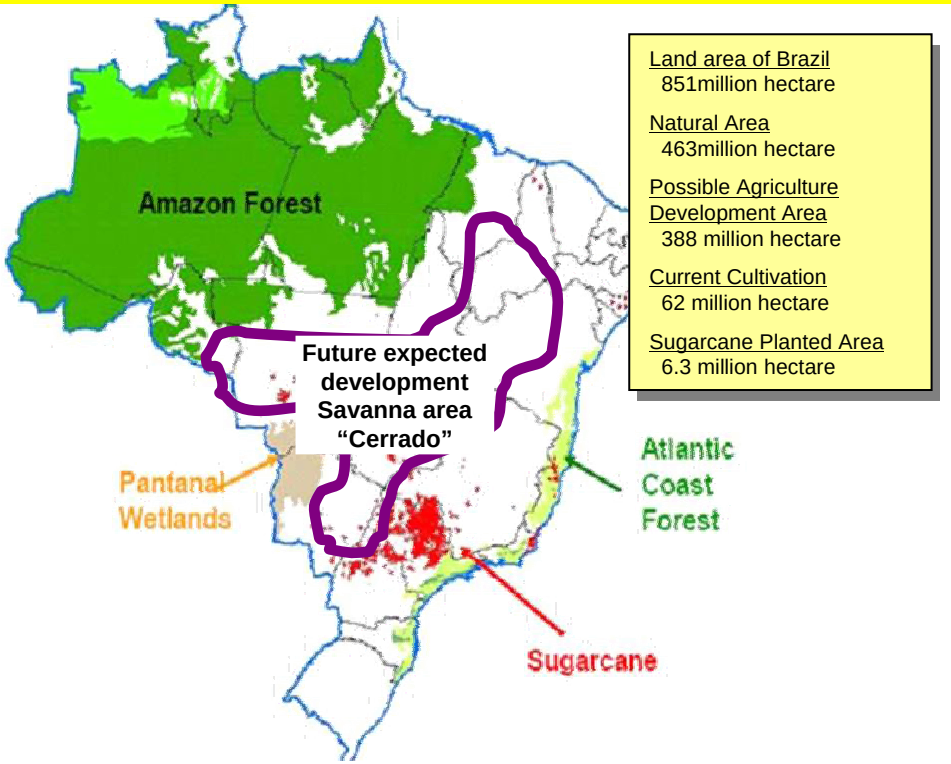
Advantage of Sugarcane of Brazil

【Brazil】

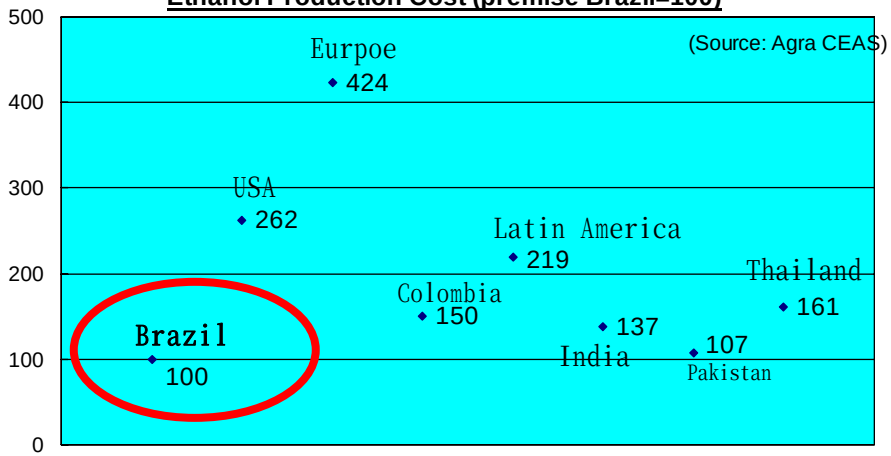
- ✓ Dominant competitiveness of the production cost
- ✓ Adequate climate condition for sugarcane cultivation
- ✓ Unused area 50 times more than the current sugarcane plantation area where it is easy to expand the production
- ✓ Huge unused area which is 9 times more than Japan with no destruction of Tropical Amazon Forest.
- ✓ Over 100 years of know-how in the use of Fuel Ethanol for Automobiles

【Sugarcane】

- ✓ Possible to be cultivated widely in Tropical, Sub Tropical Areas
- ✓ Strong resistance
- ✓ Possible to increase production by breed improvement
- ✓ Advantage of productivity per hectare, which is 3 times more than corn
- ✓ Less competition against food application compared with other raw materials
- ✓ Energy generation by bagasse is possible by using residue of sugarcane →Possible to stably obtain Carbon Credit



Ethanol Production Cost (premise Brazil=100)



Recent Foreign Investment in Brazil

- Cargill / USA origin Major Grain Company

  In June 2006 announced acquisition of Sugar & Ethanol Mill in Sao Paulo called CEVASA

- Bunge /Holland origin Major Grain Company

  In January 2007, made proposal for acquisition of the 3rd largest Sugar & Ethanol Mill, Vale do Rosario

- Louis Dreyfus / French origin Major Grain Company

  In February 2007, Agreed with the Tavares de Melo Group on acquisition of Sugar & Ethanol Business in Brazil, which made Louis Dreyfus become substantially 2nd largest Sugar & Ethanol producer Brazil.

- Mr. George Soros / USA

  In February 2006, made investment to Mote Alegre, Sugar & Ethanol mill in Minas Gerais State

Situation of Japan

August 2003

- Revision of fuel regulation allowing 3% Ethanol blending to gasoline
- Potential demand 1.8 million KL

April 2005

- Government Approval of Biofuels for Transportation in the Kyoto Protocol Target Achievement Plan
- 0.5 million KL crude oil equivalent Biofuels (equivalent to 0.85 million KL of Ethanol) by 2010

January 2006

- Petroleum Association of Japan
- ETBE use of 0.84 million KL (0.36 million KL ethanol equivalent) by 2010

February 2007

- Discussion in Biomass Nippon Comprehensive Strategy Promotion Committee
- Discussion on 6 million KL of Bio Fuel Use

Activities of Japanese Private Sector in Brazil

1. **Mitsui**

   MOU with Brazilian Partners to secure stable supply and economical efficiency

   - **March 2005:**
     MOU with Petrobras, CVRD to search best logistics solution
   - **April 2006**
     MOU with Petrobras to study on production & marketing of Ethanol
     (Business & Price Model, Project Selection)
     Mitsui has intention to invite reliable Japanese partners to the project
   - **February 2007**
     MOU with Petrobras, Camargo Correa to study on Ethanol Pipeline

2. **Itochu**
   - **Technical Cooperation Agreement with CODEVASF, CAMPO**
   - **Feasibility Study on Ethanol and Bio Diesel**

3. **Marubeni**
   - **Establish JV with Agrenco**
   - **Plan to invest in production of Bio Diesel**