USDA Support for Global Ethanol Market Development

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Global Trade in Ethanol Trending Higher

While trending higher, global trade is down from the 2012 peak due to lower import demand in the U.S. and the EU.

*Estimated 2014
Data Source: USDA, Foreign Agricultural Service, GATS/UN Trade System and Global Trade Atlas
U.S. Exports Have Grown Rapidly Since 2009

Data Source: USDA, Foreign Agricultural Service, Global Agricultural Trade System
U.S. Share of World Ethanol Exports Expands

U.S. overtook Brazil as the world’s leading ethanol exporter in 2011 and 2014.

A 7.5% surge in domestic production, competitive pricing and a decline in Brazilian production helped U.S. exporters regain market share in 2014.

U.S. Market Share (Value) vs. U.S. Market Share (Volume)

Data Source: USDA, Foreign Agricultural Service, Global Agricultural Trade System, UN Data
**Top U.S. Ethanol Export Markets**

*Most of the major markets in 2014 barely existed in 2006*

- **Canada**: 835 million USD
- **Brazil**: 266 million USD
- **UAE**: 172 million USD
- **Philippines**: 160 million USD
- **EU-28**: 119 million USD
- **South Korea**: 89 million USD
- **India**: 82 million USD
- **Mexico**: 78 million USD
- **Tunisia**: 56 million USD
- **Peru**: 43 million USD
- **Rest of World**: 120 million USD

Data Source: USDA, Foreign Agricultural Service, Global Agricultural Trade System
Exports as a share of production expand

Export Share of U.S. Ethanol Production

Source: Renewable Fuels Association
Industry partnerships form the basis of USDA export market development initiatives.

To date, US Grains Council has conducted 4 market assessment missions to 7 markets.

Buyer missions planned for Peru, Columbia, and the Philippines.

Market study planned for Japan.

No two market strategies alike.
FAS support for ethanol market development

- Market Access Program (MAP) funds
- Analytical and policy support
- Collaboration with DOE, DOC, USTR, DOD
- Post GAIN reports
- In-country stakeholder development
Blend mandates drive demand

<table>
<thead>
<tr>
<th>Year</th>
<th>Brazil</th>
<th>Canada</th>
<th>EU</th>
<th>Philippines</th>
<th>Other</th>
<th>Total U.S. Ethanol Exports (volume)</th>
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<tr>
<td>2006</td>
<td></td>
<td></td>
<td>11%</td>
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<td>2007</td>
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<tr>
<td>2009</td>
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<tr>
<td>2010</td>
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<tr>
<td>2011</td>
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<td>2012</td>
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<td>2014</td>
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<td>83%</td>
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</table>
**Case Study: The Philippines**

**Policy Framework**
- E5 legislation took effect in 2009
- E10 mandate in 2013
- E20 by 2020 (?)

**Current Market Situation**
- Compliance with E10 has fallen short of targets but expected to be met this year
- 3 more plants came on line in 2014 bringing total prod capacity to 222 mil liters; additional plants set to come on line in 2015 bringing total capacity to 305 mil liters
- 90% of gasoline consumed is E10
- Imports make up the gap between production and consumption
- U.S. has over 50% market share
- 15 more plants would need to come on line to meet the E20 mandate

**Current Challenges**
- Feedstock availability/pricing
- Logistics and infrastructure

**Market Development Opportunities**
- Ethanol market assessment mission in Dec 2014
- Additional missions planned
- APEC initiative
APEC has an aspiration goal of doubling the percentage of renewables in the APEC energy mix by the year 2030.

Build policy support/awareness of ethanol as a renewable energy source in transport fuel.

Conduct a series of workshops geared toward information sharing, adoption of best practices and enabling policy environments.
Potential New Ethanol Demand

<table>
<thead>
<tr>
<th>Country</th>
<th>2012 @ E10</th>
<th>2012 @ E10</th>
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<tr>
<td>Japan</td>
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<td>0.5</td>
<td>2.0</td>
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</table>
Sustainability and food vs. fuel still major concerns

- Global BioEnergy Partnership (GBEP)
- Fuel and Food
Thank you!