



Renewable Fuels Association

Homegrown *for the* Homeland

ETHANOL INDUSTRY OUTLOOK 2005



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Renewable Fuels Association

February 2005

The growth boom in the U.S. fuel ethanol industry continues to take the nation by storm. In 2004, the industry produced a record 3.41 billion gallons, more than double that produced in 2000. Consider this: It took the industry ten years to reach our first billion gallons. It took another ten years to achieve the second billion gallons. It has taken just two years to reach the third billion gallons. This is a testament to the will and dedication of all those involved in the ethanol industry to provide a reliable, cost-effective and homegrown fuel for the homeland.

This year's Ethanol Industry Outlook explores the policy and market drivers behind the record growth in the industry, and why we anticipate demand for ethanol to remain strong for the future. Specifically, we see historic passage of the Volumetric Ethanol Excise Tax Credit (VEETC) providing the flexibility needed to expand ethanol blending, particularly into E85, E diesel and fuel cell markets.

Support remains strong for passage of a Renewable Fuels Standard (RFS) that would reduce our nation's foreign oil dependence and increase American agriculture's contribution to our energy needs. In 2004, Hawaii joined Minnesota in approving a state ethanol requirement, and Minnesota is seeking to expand its ethanol use from 10 to 20%. Continued concerns about MTBE water contamination are moving ethanol to the forefront in reformulated gasoline markets as the oxygenate of choice to reduce ozone pollution.

For the foreseeable future, these policy and market drivers - air quality, the economy, energy security and the growing need for domestic fuel sources - will compel growth for ethanol, not only in the U.S. but abroad. For the first time, this year's Outlook discusses how the growing worldwide production and use of ethanol impacts international trade.

The 2005 Ethanol Industry Outlook serves as your comprehensive guide of timely and accurate facts and figures relating to the ethanol industry. I trust you will find it useful and informative.

Sincerely,

A handwritten signature in black ink that reads "Bob Dinneen".

Bob Dinneen
President



"HOMEGROWN FOR THE HOMELAND"

OVER THE PAST SEVERAL YEARS, THE ETHANOL INDUSTRY HAS EXPANDED RESPONSIBLY AND QUICKLY TO GROWING DEMAND FOR RENEWABLE FUELS IN BOTH EXISTING AND EMERGING MARKETS. RECORD OIL AND GASOLINE PRICES, FEDERAL AND STATE CLEAN FUEL PROGRAMS, AND MOUNTING CONCERNS ABOUT OUR NATION'S GROWING DEPENDENCE ON IMPORTED ENERGY PROMPTED UNPRECEDENTED ETHANOL DEMAND. AS A RESULT, ETHANOL IS BLENDED IN MORE THAN 30% OF THE GASOLINE SOLD IN THE U.S. TODAY.



"Renewable fuels, such as ethanol and biodiesel, play an important role in a comprehensive energy plan that promotes conservation and reduces dependence on foreign sources of energy."

– President George Bush

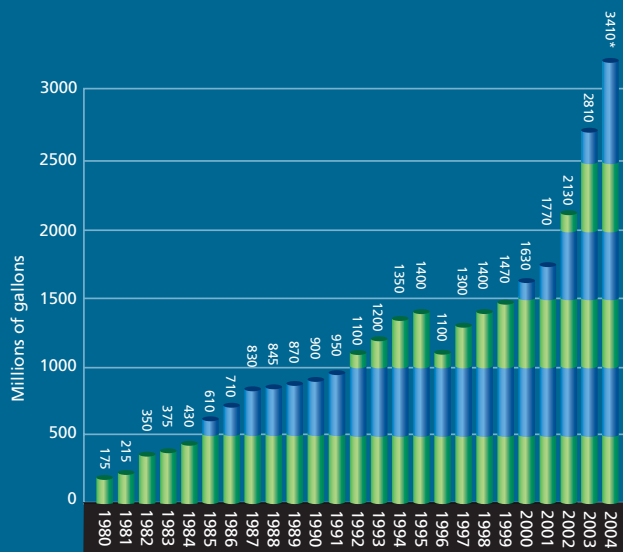
Secure Energy for the Nation

Renewable fuels produced from homegrown resources ensure a safe, reliable source of energy for the homeland, while at the same time generating significant economic and environmental benefits to the nation.

As concerns in the U.S. continue to grow regarding global terrorism and energy dependence on unstable regions of the world, particularly the Middle East, the expanded production and use of domestically produced renewable fuels in the nation's energy mix is a public policy imperative.



Historic U.S. Fuel Ethanol Production



Source: U.S. Energy Information Administration / Renewable Fuels Association

*Estimate



U.S. Ethanol Production Facilities

-  Ethanol Production Facility
-  Under Construction

Source: Renewable Fuels Association, January 2005



Record Growth Continues

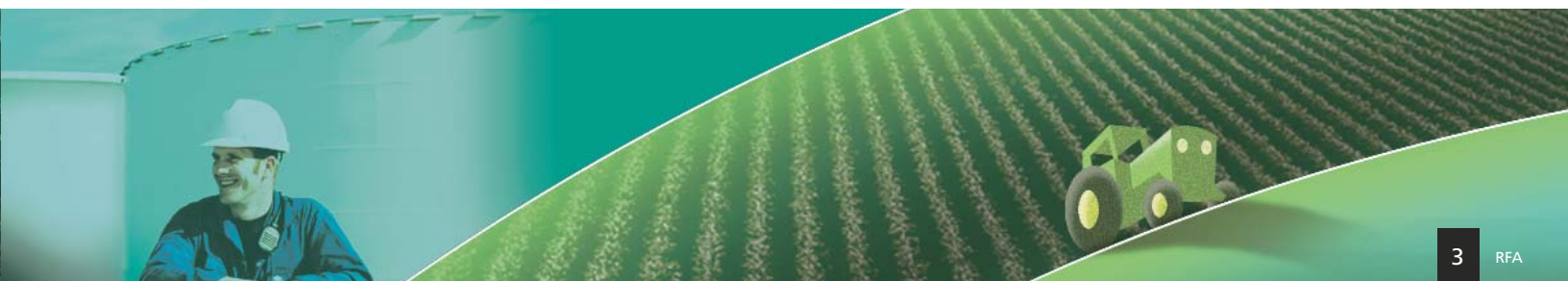
2004 continued the record growth trend that has defined the U.S. ethanol industry over the past several years. For the year, 81 ethanol plants located in 20 states produced a record 3.41 billion gallons, a 21% increase from 2003 and 109% since 2000.

Construction of 12 new ethanol plants was completed in 2004. These new facilities, combined with expansions at existing plants, increased annual production capacity by 500 million gallons to over 3.6 billion gallons. At the end of 2004, 16 plants and 2 major expansions were under construction, representing an additional 750 million gallons of production capacity. In 2004, dry mill ethanol facilities accounted for 75% of U.S. ethanol production, and wet mills 25%.

State Ethanol Production Capacity

State	Million gallons/year
Iowa	1262.5
Illinois	816
Minnesota	523.6
Nebraska	523
South Dakota	456
Wisconsin	210
Kansas	149.5
Indiana	102
Missouri	100
Tennessee	67
Michigan	50
North Dakota	33.5
New Mexico	30
Texas	30
Kentucky	25.4
California	8
Wyoming	5
Ohio	4
Colorado	1.5
Washington	0.7
Total	4397.7

Includes gallons currently under construction.
Source: Renewable Fuels Association, January 2005



NEW MARKETS DRIVE ETHANOL DEMAND

Demand for fuel ethanol in the United States reached a new high in 2004 of 3.57 billion gallons. Beginning in January 2004, as California, New York and Connecticut discontinued the use of MTBE in reformulated gasoline (RFG), ethanol seamlessly filled the void. In fact, with these new markets

ethanol-blended RFG surpasses MTBE-blended RFG as the second most common fuel in the U.S., behind only conventional gasoline. Many other states are considering MTBE bans as a means of protecting drinking water supplies.

In 2005, several states, including Idaho, Iowa, Missouri, Montana, Oregon, and Wisconsin, are considering legislation to join Hawaii and Minnesota in requiring the use of ethanol in gasoline.

2004 Ethanol Use by Market

<i>Market</i>	<i>Million Gallons</i>
Federal Reformulated Gasoline (RFG)	1950
Conventional Gasoline	1050
Federal Winter Oxygenated Fuels	290
Minnesota Ethanol Program	280
Total Use	3570

Source: Renewable Fuels Association

Moreover, record high crude oil prices made ethanol an attractive octane blend component across the country. The U.S. Energy Information Administration expects crude oil to remain over \$30 per barrel for the foreseeable future leaving the fundamental forces driving ethanol use very strong.

State Actions Help Drive Ethanol Use

In the absence of federal action, increasingly states are taking steps to promote the rural economic, environmental and energy security benefits of renewable fuels. In 2004, Hawaii joined Minnesota in requiring the use of ethanol in gasoline sold in the state.

State MTBE Bans

<i>State</i>	<i>Effective Date</i>
Arizona	Effective
California	Effective
Colorado	Effective
Connecticut	Effective
Illinois	Effective
Indiana	Effective
Iowa	Effective
Kansas	Pending federal action
Kentucky	01-01-06
Maine	01-01-07
Michigan	Effective
Minnesota	Effective
Missouri	07-01-05
Nebraska	Effective
New Hampshire	Pending federal action
New York	Effective
Ohio	07-01-05
South Dakota	Effective
Washington	Effective
Wisconsin	Effective

Source: Renewable Fuels Association, January 2005

ETHANOL: COST-EFFECTIVE FOR CONSUMERS

Ethanol is less expensive than other oxygenates, octane enhancers and often even conventional gasoline. Some predicted the switch to ethanol in California, New York and Connecticut would dramatically increase consumer gas prices in these states. But the switch from MTBE to ethanol went so smoothly, both state and federal observers agree there was no negative impact on gasoline supplies or prices.

Using ethanol helps lower gasoline prices by expanding U.S. gasoline supplies and reducing the need for importing expensive, high-octane, petroleum-based gasoline components or more crude oil from unstable parts of the world like the Middle East.

The ethanol industry has a proven track record of cost-effectively replacing MTBE and expanding gasoline supplies from coast-to-coast. The ethanol industry continues to expand and is prepared to assist any state confronting water quality issues or high gasoline prices.

A RECENT STUDY, "Ethanol and Gasoline Prices," highlighted the important role ethanol use plays in reducing consumer prices. If ethanol were removed from the market, the shortfall would have to be made up from expensive imports. The study concluded that without ethanol:

- gasoline prices would increase 14.6% in the short term (29.2¢/gallon if gas was \$2.00/gallon);
- gasoline prices would increase 3.7% in the long term even after refiners build new capacity or secure alternative sources of supply (7.4¢/gallon if gas was \$2.00/gallon); and,
- refiners would be forced to import more than 217,000 barrels per day of high-octane, clean-burning gasoline blending components.

Source: LECG, LLC, May 2004

Over 30% of all gasoline in the United States is blended with ethanol.

"The supply and infrastructure challenges to implement the New York and Connecticut MTBE bans have been successfully met by the petroleum and ethanol industries to date. An adequate ethanol distribution system was developed; adequate stocks of ethanol have been in place; distribution terminals were retrofitted to accommodate ethanol delivery, storage and blending; and adequate stocks of reformulated blendstock used for ethanol blending have been produced and distributed. MTBE ban induced price increases have not been reported by EIA [U.S. Energy Information Administration], New York or Connecticut who are monitoring prices. California energy officials report a similar experience in meeting their January 2004 MTBE ban."

– Coalition of Northeastern Governors Policy Research Center, April 2004



ETHANOL INCREASES ENERGY INDEPENDENCE

The importance of ethanol to America's energy security and to American consumers has never been greater. Political unrest and sabotage attacks on oil infrastructure in the major oil producing countries, particularly in the Middle East, have disrupted the flow of oil. Fears of additional terrorist attacks have added a "risk premium" to world oil prices.

At the same time the supply chain is threatened, developing nations such as China and India have fueled increased global demand for oil over the past year. The result: 2004

was a year of record world oil prices topping \$50 a barrel. And demand for petroleum in the U.S. continues to outpace domestic supply, resulting in growing imports and record gasoline prices.

64% of U.S. oil consumption was imported in 2004.

77% of U.S. oil consumption is estimated to be imported by 2025.

Source: U.S. Energy Information Administration's Annual Energy Outlook 2005



"We will continue to move forward on a comprehensive energy policy that supports alternative sources of fuel like ethanol and biodiesel, so we can make this nation less dependent on foreign sources."

– Vice President Dick Cheney, August 2004

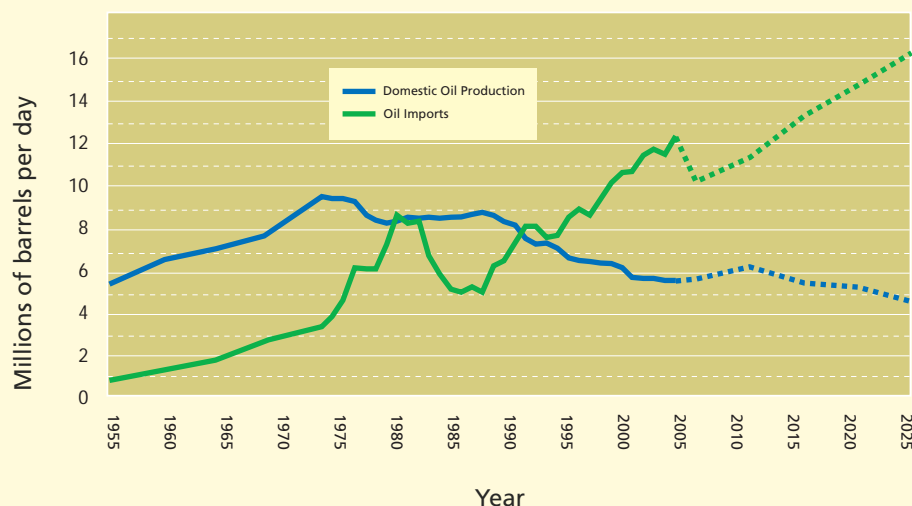
How Ethanol Can Help

Agriculture can help solve our energy problems through the production of domestic liquid fuels such as ethanol and biodiesel. Blending ethanol with gasoline stretches our fuel supplies and reduces the amount of oil we need to import by hundreds of thousands of barrels each day.

Every 1 Btu of petroleum fuel used to produce ethanol generates 13.2 Btus, thereby greatly enhancing U.S. energy security.

– USDA

U.S. Oil Production vs. Imports



Source: US Energy Information Administration

LEGISLATIVE SUCCESS BOOSTS ETHANOL DEMAND

Working with numerous highway groups and farm organizations, the Renewable Fuels Association led the fight for an historic legislative victory in 2004, culminating with the signing into law of the American Jobs Creation Act. This landmark tax bill will help secure the future of biofuels. It creates the new Volumetric Ethanol Excise Tax Credit (VEETC), which ensures Highway Trust Fund (HTF) revenues are not impacted by ethanol use. Further, VEETC makes ethanol blending flexible for petroleum companies and more accessible for growing markets such as E85, E diesel and fuel cells.

VEETC is expected to generate on average more than \$3 billion per year in additional HTF revenue, which will improve the ability of the federal government and states to address transportation infrastructure needs.

Commitment to Biofuels Strengthened

VEETC also extends the ethanol tax incentive at \$.51 per gallon through December 31, 2010, creates a new biodiesel tax incentive, and improves the small ethanol producer tax credit to allow a farmer cooperative to pass the credit along to its farmer owners. These changes will help ensure strong demand for biofuels in the years ahead.

"[VEETC] will ensure that America continues to move toward 'home-grown' alternative energy sources to power the nation's motor vehicle fleet—thus reducing our dependence on foreign oil—at the same time we are working toward meeting the nation's transportation needs."

– American Road & Transportation Builders Association President & CEO Pete Ruane



2003 Estimated Ethanol-Blended Fuel Use by State

(in thousands of gallons)

Alabama	149,856	Montana	17,472
Alaska	37,483	Nebraska	371,553
Arizona	136,510	Nevada	440,028
Arkansas	-	New Hampshire	-
California	10,328,817	New Jersey	12,206
Colorado	829,699	New Mexico	85,775
Connecticut	204,775	New York	224,400
Delaware	-	North Carolina	859,316
Dist. of Col.	-	North Dakota	111,331
Florida	-	Ohio	1,837,216
Georgia	-	Oklahoma	-
Hawaii	-	Oregon	369,341
Idaho	-	Pennsylvania	84,318
Illinois	3,853,362	Rhode Island	4,586
Indiana	1,388,287	South Carolina	-
Iowa	1,043,910	South Dakota	239,118
Kansas	408,196	Tennessee	-
Kentucky	583,898	Texas	326,243
Louisiana	467,316	Utah	44,530
Maine	-	Vermont	-
Maryland	2,306	Virginia	797,246
Massachusetts	10,351	Washington	662,741
Michigan	1,514,178	West Virginia	167,832
Minnesota	2,752,096	Wisconsin	1,078,773
Mississippi	-	Wyoming	-
Missouri	1,083,090	Total	32,528,157

Source: Federal Highway Administration

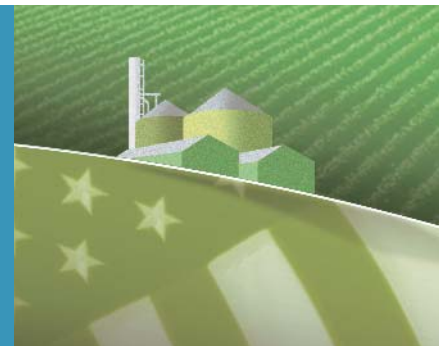
"Investing in alternative forms of clean-burning energy is good for the environment, good for national security and energy independence, good for job creation and economic development, and good for taxpayers."

**– Senate Finance Committee Chairman
Chuck Grassley (R-IA)**

U.S. FUEL ETHANOL PRODUCTION CAPACITY

Company	Location	Feedstock	Current Capacity (mmgy)	Under Construction/ Expansions (mmgy)
Abengoa Bioenergy Corp.	York, NE	Corn/milo	55	
	Colwich, KS		25	
	Portales, NM		15	15
ACE Ethanol, LLC	Stanley, WI	Corn	30	
Adkins Energy, LLC★	Lena, IL	Corn	40	
AGP★	Hastings, NE	Corn	52	
Agra Resources Coop. d.b.a. EXOL★	Albert Lea, MN	Corn	40	
Agri-Energy, LLC★	Luverne, MN	Corn	21	
Alchem Ltd. LLLP	Grafton, ND	Corn	10.5	
Al-Corn Clean Fuel★	Claremont, MN	Corn	30	
Amaizing Energy, LLC★◆	Denison, IA	Corn		40
Archer Daniels Midland	Decatur, IL	Corn	1070	
	Cedar Rapids, IA	Corn		
	Clinton, IA	Corn		
	Columbus, NE	Corn		
	Marshall, MN	Corn		
	Peoria, IL	Corn		
	Wallhalla, ND	Corn/barley		
Aventine Renewable Energy, Inc.	Pekin, IL	Corn	100	
	Aurora, NE	Corn	40	
Badger State Ethanol, LLC★	Monroe, WI	Corn	48	
Big River Resources, LLC★	West Burlington, IA	Corn	40	
Broin Enterprises, Inc.	Scotland, SD	Corn	9	
Bushmills Ethanol, Inc.★◆	Atwater, MN	Corn		40
Cargill, Inc.	Blair, NE	Corn	85	
	Eddyville, IA	Corn	35	
Central Iowa Renewable Energy, LLC★◆	Goldfield, IA	Corn		50
Central MN Ethanol Coop★	Little Falls, MN	Corn	20.5	
Central Wisconsin Alcohol	Plover, WI	Seed corn	4	
Chief Ethanol	Hastings, NE	Corn	62	
Chippewa Valley Ethanol Co.★	Benson, MN	Corn	45	
Commonwealth Agri-Energy, LLC★	Hopkinsville, KY	Corn	23	
Corn Plus, LLP★	Winnebago, MN	Corn	44	
Dakota Ethanol, LLC★	Wentworth, SD	Corn	50	
DENCO, LLC★	Morris, MN	Corn	21.5	
East Kansas Agri-Energy, LLC★◆	Garnett, KS	Corn		35
ESE Alcohol Inc.	Leoti, KS	Seed corn	1.5	
Ethanol2000, LLP★	Bingham Lake, MN	Corn	30	
Glacial Lakes Energy, LLC★	Watertown, SD	Corn	50	
Golden Cheese Company of California★	Corona, CA	Cheese whey	5	
Golden Grain Energy, LLC★	Mason City, IA	Corn	40	
Golden Triangle Energy, LLC★	Craig, MO	Corn	20	
Grain Processing Corp.	Muscatine, IA	Corn	20	
Granite Falls Energy, LLC◆	Granite Falls, MN	Corn		45
Great Plains Ethanol, LLC★	Chancellor, SD	Corn	50	
Hawkeye Renewables, LLC	Iowa Falls, IA	Corn	45	
Heartland Corn Products★	Winthrop, MN	Corn	36	
Heartland Grain Fuels, LP★	Aberdeen, SD	Corn	8	
	Huron, SD	Corn	14	
Husker Ag, LLC★	Plainview, NE	Corn	24	
Iowa Ethanol, LLC★	Hanlontown, IA	Corn	55	

View an up-to-the-minute list of ethanol plants at:
www.ethanolRFA.org/eth_prod_fac.html



Company	Location	Feedstock	Current Capacity (mmgy)	Under Construction/ Expansions (mmgy)
Illinois River Energy, LLC*	Rochelle, IL	Corn		50
James Valley Ethanol, LLC	Groton, SD	Corn	50	
KAAPA Ethanol, LLC*	Minden, NE	Corn	40	
Land O' Lakes*	Melrose, MN	Cheese whey	2.6	
Lincolnland Agri-Energy, LLC*	Palestine, IL	Corn	40	
Lincolnway Energy, LLC*	Nevada, IA	Corn		50
Liquid Resources of Ohio*	Medina, OH	Waste beverage		4
Little Sioux Corn Processors, LP*	Marcus, IA	Corn	49	
Merrick/Coors	Golden, CO	Waste beer	1.5	
Michigan Ethanol, LLC	Caro, MI	Corn	50	
MGP Ingredients, Inc.	Pekin, IL Atchison, KS	Corn/wheat starch	78	
Mid-Missouri Energy, Inc.*	Malta Bend, MO	Corn		40
Midwest Grain Processors*	Lakota, IA	Corn	50	45
Midwest Renewable Energy, LLC	Sutherland, NE	Corn	15	
Miller Brewing Co.	Olympia, WA	Brewery waste	0.7	
Minnesota Energy*	Buffalo Lake, MN	Corn	18	
New Energy Corp.	South Bend, IN	Corn	102	
Northeast Missouri Grain, LLC*	Macon, MO	Corn	40	
Northern Lights Ethanol, LLC*	Big Stone City, SD	Corn	50	
Northstar Ethanol, LLC*	Lake Crystal, MN	Corn		50
Otter Creek Ethanol, LLC*	Ashton, IA	Corn	55	
Panhandle Energies of Dumas, LP*	Dumas, TX	Corn/Grain Sorghum		30
Parallel Products	Louisville, KY R. Cucamonga, CA	Beverage waste	5.4	
Permeate Refining	Hopkinton, IA	Sugars & starches	1.5	
Pine Lake Corn Processors, LLC*	Steamboat Rock, IA	Corn		20
Platte Valley Fuel Ethanol, LLC	Central City, NE	Corn	40	
Pro-Corn, LLC*	Preston, MN	Corn	40	
Quad-County Corn Processors*	Galva, IA	Corn	23	
Reeve Agri-Energy	Garden City, KS	Corn/Grain Sorghum	12	
Siouxland Energy & Livestock Coop*	Sioux Center, IA	Corn	22	
Sioux River Ethanol, LLC*	Hudson, SD	Corn	55	
Tall Corn Ethanol, LLC*	Coon Rapids, IA	Corn	49	
Tate & Lyle	Loudon, TN	Corn	67	
Trenton Agri Products, LLC	Trenton, NE	Corn	30	
Tri-State Ethanol Co., LLC*	Rosholt, SD	Corn	18	
United WI Grain Producers, LLC*	Friesland, WI	Corn		40
U.S. Energy Partners, LLC	Russell, KS	Grain Sorghum/ wheat starch	40	
Utica Energy, LLC	Oshkosh, WI	Corn	48	
VeraSun Energy Corporation	Aurora, SD	Corn	102	
VeraSun Fort Dodge, LLC*	Fort Dodge, IA	Corn		110
Voyager Ethanol, LLC*	Emmetsburg, IA	Corn		50
Western Plains Energy, LLC*	Campus, KS	Corn	30	
Western Wisconsin Renewable Energy, LLC*	Boyceville, WI	Corn		40
Wyoming Ethanol	Torrington, WY	Corn	5	
Total Existing Capacity			3643.7	
Total Under Construction/Expansions				754.0
Total Capacity			4397.7	

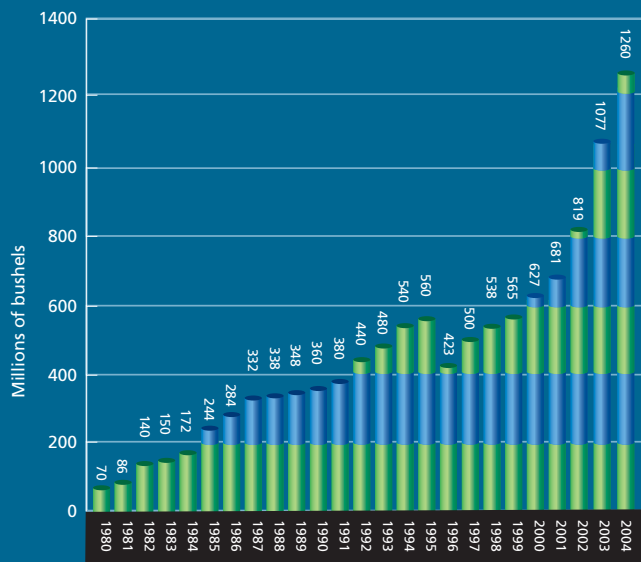
*Farmer-Owned ♦Under Construction

ETHANOL: THE VALUE-ADDED AGRICULTURE SUCCESS STORY

As the ethanol industry continues to expand, it becomes an increasingly important market for American agricultural products. In 2004, the U.S. ethanol industry processed a record 1.26 billion bushels of corn into ethanol, 11% of the nation's corn crop. Ethanol production also consumed more than 11% of the nation's grain sorghum.

The record 11.8 billion bushel corn crop in 2004 highlights the importance of the growing ethanol industry for corn growers seeking markets for their products. According to USDA, ethanol production increases the price a farmer receives for corn by 25 to 50 cents per bushel, or as much as \$5.5 billion over the entire corn crop.

Corn Utilized in Ethanol Production

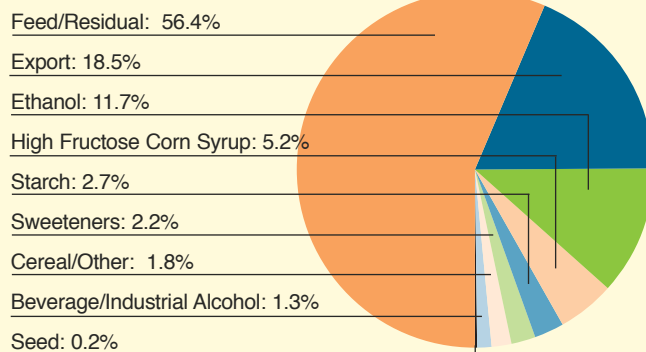


Source: National Corn Growers Association

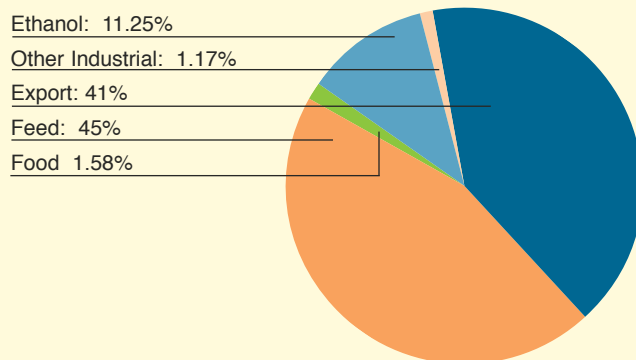
"The ethanol market is the single most successful and fastest growing value-added market for farmers – it is a rural economic development engine in the form of jobs and farm income. Last year 11 percent of the corn crop went to ethanol, this year it is expected to reach nearly 13 percent. As the ethanol industry continues to grow, opportunities for corn growers will expand as well."

-- Leon Corzine, President, National Corn Growers Association

U.S. Corn Usage by Segment 2004



U.S. Grain Sorghum Usage by Segment 2004



Source: USDA, ERS, Feed Outlook, December 2004

HIGH VALUE FEED CO-PRODUCTS

While ethanol production consumes the grain's starch, the protein, minerals, fat and fiber are concentrated during the production process to produce a highly valued and nutritious livestock feed. The majority of feed is then dried and sold as Distillers Dried Grains with Solubles (DDGS). However, approximately 20-25% of the feed is shipped wet locally, reducing energy input costs and providing another market for producers.

Historically, over 85% of DDGS has been fed to dairy and beef cattle as a high-quality, economical feed ingredient. With continuing research, DDGS use in swine and poultry diets is expanding also.

"The ethanol production process increases the fat and protein content of the final feed product, making it an excellent livestock feed as well as a source of bypass protein for dairy cows."

– Murlin Olson
Olsons' Custom Farm Services, Inc.



A modern dry-mill ethanol plant utilizes the starch from one bushel of corn to produce 2.8 gallons of ethanol and more than 17 pounds of distillers grains.

"Research conducted at several universities as well as the University of Minnesota has shown that corn DDGS contributes several valuable nutrients in poultry diets including energy, amino acids and phosphorus. In Minnesota, DDGS is used regularly in turkey diets as an economical feed ingredient and high quality products are in demand."

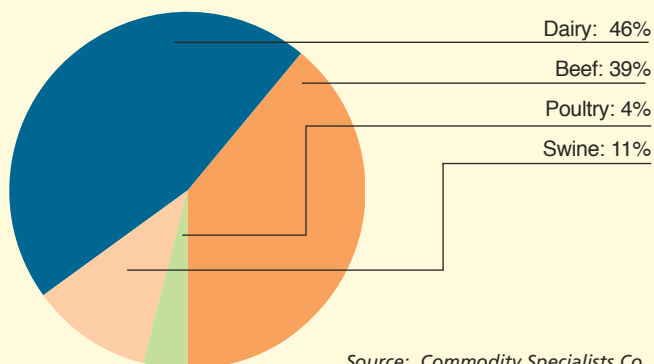
– Dr. Sally Noll
Professor of Poultry (Turkeys) Science
Department of Animal Science
University of Minnesota



In 2004:

- Ethanol dry mills produced approximately 7.3 million metric tons of distillers grains.
- Ethanol wet mills produced approximately 426,400 metric tons of corn gluten meal, 2.36 million metric tons of corn gluten feed and germ meal, and 560 million pounds of corn oil.

2003 North American DDGS Consumption



Source: Commodity Specialists Co.

DDGS Export Opportunities

The export market represents an opportunity for new market growth as DDGS production expands along with ethanol production. Today, the U.S. exports approximately one million metric tons of DDGS, with the largest importers being Ireland, the United Kingdom, Europe, Mexico and Canada.

ETHANOL ENHANCES THE ENVIRONMENT

The use of ethanol significantly reduces harmful tailpipe emissions from both automobiles and off-road vehicles (ATVs, snowmobiles, watercraft and lawn mowers) that contribute to air pollution. Ethanol contains 35% oxygen, which aids in the combustion of petroleum fuels. Ethanol is water soluble, non-toxic and biodegradable. It has become the oxygenate of choice in federal clean fuel programs including reformulated gasoline (RFG) and winter oxygenated fuels required by the Clean Air Act.

Ethanol Reduces Vehicle Emissions

A recent study found that a 10% ethanol blended fuel will:

- Reduce tailpipe fine particulate matter (PM) emissions by 50%.
- Reduce secondary PM formation by diluting aromatic content in gasoline.
- Reduce carbon monoxide (CO) emissions by up to 30% - even in new cars.
- Reduce toxics content by 13% (mass).
- Reduce toxics content by 21% (potency).

Source: Smog Reyes, February 2004

Ethanol-blended fuels reduced CO₂-equivalent greenhouse gas emissions by approximately 7.03 million tons in 2004, equal to removing the annual greenhouse gas emissions of 1.04 million cars from the road.

- Argonne National Laboratory, GREET 1.6 Model

"NRDC [Natural Resources Defense Council] strongly supports biofuels grown on American farms as an alternative to foreign oil."

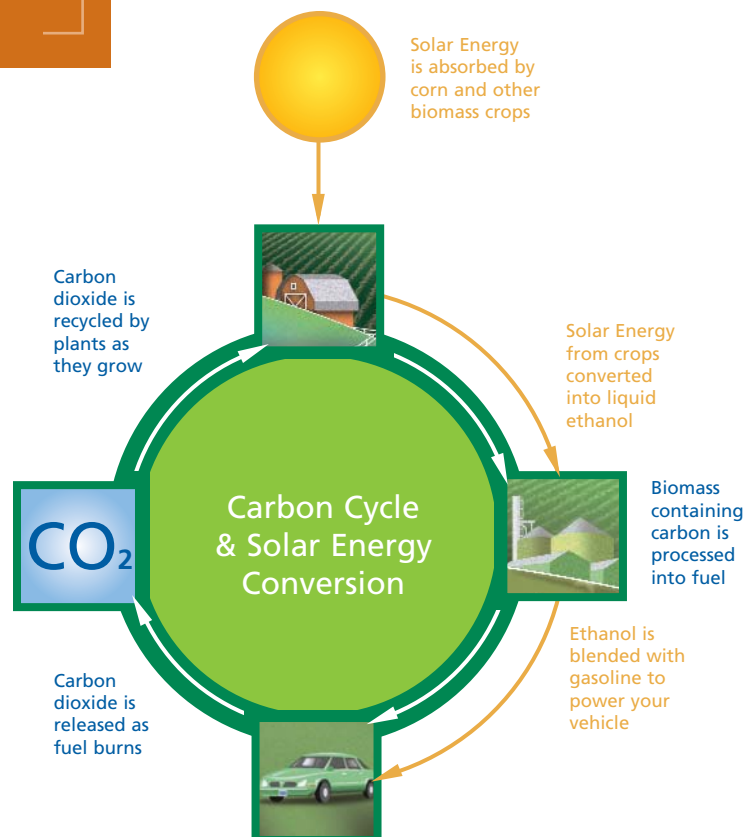
Ashok Gupta, NRDC Energy Program Director

Ethanol's Positive Energy Yield

Renewable ethanol is produced from plants that use solar energy to grow. Ethanol production releases this energy from the plants, replacing fossil energy use. According to a 2004 U.S. Department of Agriculture study, ethanol produces 167% of the fossil energy that is used to grow, harvest, transport and refine grain into ethanol.

Ethanol Reduces Global Warming Emissions

In the U.S. several state legislatures are working to cap greenhouse gas (GHG) emissions. According to the Pew Center on Global Climate Change, the increased use of renewable fuels, such as ethanol, provide the best option for reducing GHG emissions from the transportation sector over the next 15 years. According to Argonne National Laboratory, 10% ethanol blends reduce GHG emissions by 12-19%. Ethanol produced from cellulose could reduce GHG emissions even further.



Source: Renewable Fuels Association

ETHANOL STRENGTHENS THE HOMELAND

The production of ethanol sparks capital investment, economic development and job creation in communities across America while providing value-added markets for farmers. By raising the price of agricultural commodities, ethanol also helps to lower federal farm program costs.

Rural Economic Engine

The ethanol industry powered the U.S. economy in 2004 by:

- Adding more than \$25.1 billion to gross output through the combination of spending for annual operations and capital spending for new plants under construction;
- Supporting the creation of more than 147,000 jobs in all sectors of the economy;
- Boosting U.S. household income by \$4.4 billion through increased economic activity and new jobs;
- Adding \$1.3 billion of tax revenue for the Federal government and \$1.2 billion for State and Local governments; and
- Reducing the U.S. trade deficit by \$5.1 billion by eliminating the need to import 143.3 million barrels of oil.

Source: "Contribution of the Ethanol Industry to the Economy of the United States," LECG, LLC, January 2005

The USDA estimates ethanol production reduced farm program costs by \$3.2 billion dollars in 2004 by increasing the demand and price of corn.

Ethanol and the Local Community

Ethanol plants serve as local economic powerhouses. A 40 million gallon per year ethanol plant will have the following beneficial impacts on its local community:

- Provide a one-time boost of \$142 million to the local economy during construction.
- Expand the local economic base by \$110.2 million each year through the direct spending of \$56 million.
- Create 41 full-time jobs at the plant and a total of 694 jobs throughout the entire economy.
- Increase the local price of corn by an average of 5-10 cents a bushel, adding significantly to farm income in the general area surrounding the plant.
- Increase household income for the community by \$19.6 million annually.
- Boost state and local sales tax receipts by an average of \$1.2 million (varies depending on local rates).
- Provide an average 13.3% annual return on investment over ten years to a farmer who invests \$20,000 in an ethanol production facility.

Source: "Ethanol and the Local Community," AUS Consultants and SJH & Company, June 2002

"Expanding the nation's production and use of renewable fuels, like ethanol, will not only improve the environment, lessen dependence on oil imports, but will also contribute to the economy, especially in our rural, agricultural communities."

– William McNary, President, US Action (3 million member consumer organization)



THE WORLD OF ETHANOL



With many nations seeking to reduce petroleum imports, boost rural economies, and improve air quality, world ethanol production rose to nearly 11 billion gallons in 2004. Of the three grades of ethanol – fuel, beverage, and industrial – increased demand for fuel grade ethanol is driving record ethanol production in many countries. In fact, fuel ethanol accounted for about 73% of world production, with beverage ethanol at 17% and industrial ethanol at 10%.

2004 World Ethanol Production

(All grades, in millions of gallons)

Brazil	3989	Italy	40
U.S.	3535	Australia	33
China	964	Japan	31
India	462	Pakistan	26
France	219	Sweden	26
Russia	198	Philippines	22
South Africa	110	South Korea	22
U.K.	106	Guatemala	17
Saudi Arabia	79	Cuba	16
Spain	79	Ecuador	12
Thailand	74	Mexico	9
Germany	71	Nicaragua	8
Ukraine	66	Mauritius	6
Canada	61	Zimbabwe	6
Poland	53	Kenya	3
Indonesia	44	Swaziland	3
Argentina	42	Others	338
		Total	10770

Source: F.O. Licht

Growth in fuel ethanol production is expected to accelerate as countries seek ways to comply with the greenhouse gas emissions limits contained in the Kyoto Protocol. Brazil has long required approximately 25% ethanol in their gasoline. More recently, ethanol programs have been developed in several other countries and are under discussion in many more.

Country	Ethanol Program
Brazil	Requires 25% ethanol blends
European Union	2% (energy content) biofuels target by 2005, increasing to 5.75% by 2010
Saskatchewan, Canada	Requires 5% ethanol blends, increasing to 7.5% in 2005
Manitoba, Canada	Requires 10% ethanol blends by end of 2005
Colombia	Requires 10% ethanol blends in large cities in September 2005
Thailand	Requires all gasoline stations in Bangkok to sell 10% ethanol blends
China	Requires ethanol blends in several provinces
Argentina	Requires move to 5% ethanol blends over next five years

"The new ethanol plants across Canada supported by [the Ethanol Expansion Program] will help us reduce transportation-related greenhouse gas emissions as well as create new economic opportunities. Promoting clean, renewable energy and greater energy efficiency will help ensure a sustainable future for Canadians and will play a key role in helping our country address climate change."

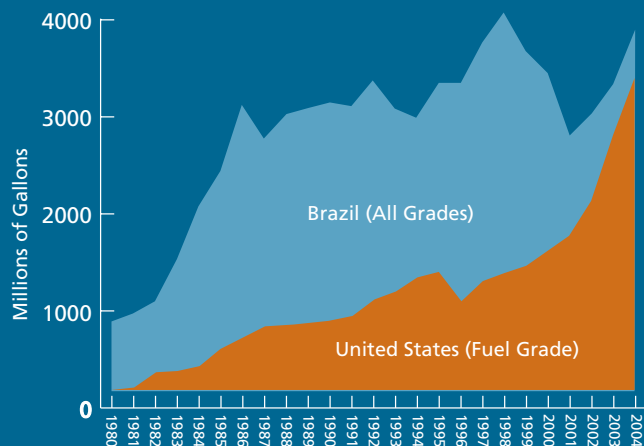
-- R. John Efford, Canada's Minister of Natural Resources



ETHANOL TRADE GROWS IN WESTERN HEMISPHERE

From Canada to Argentina, the Western Hemisphere produces more than 70% of world ethanol production. Although Brazil and the U.S. are the leaders, Canada and Central and South American countries are ramping up their ethanol production capacity. While most ethanol is consumed in the same country in which it is produced, 2004 witnessed an increase in ethanol trade from Brazil, the largest ethanol producer and exporter.

Historic U.S./Brazil Ethanol Production



Source: Renewable Fuels Association/Datagro

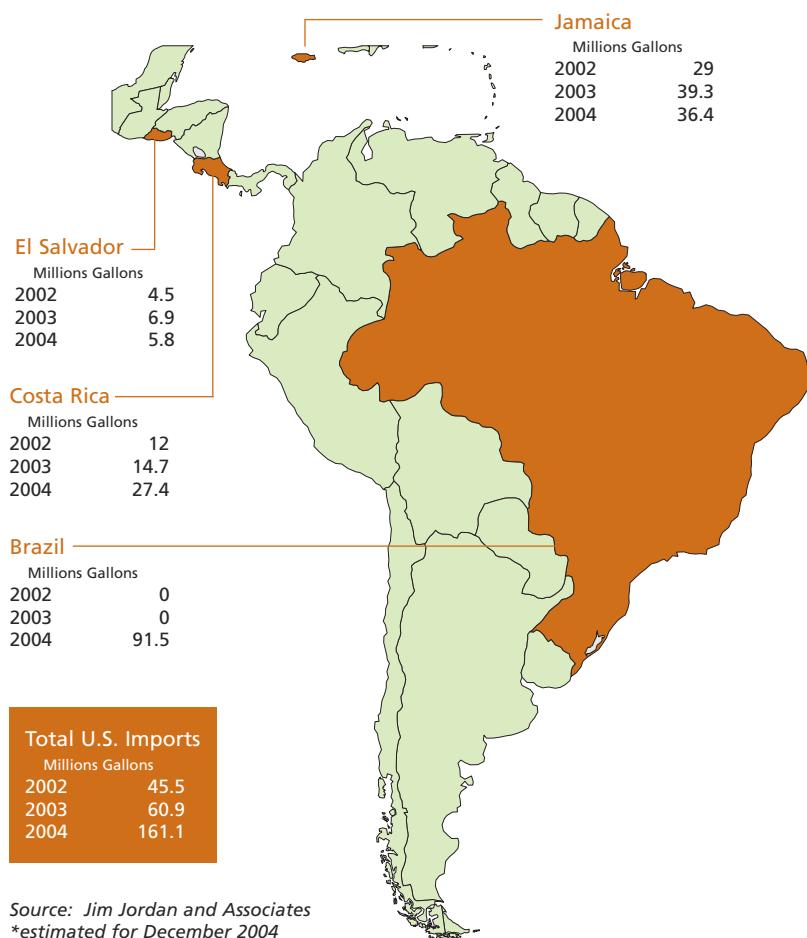
2004 Brazilian Ethanol Exports, All Grades

(in millions of gallons)

India	125
USA	112
S. Korea	63
Japan	55
Sweden	52
Netherlands	41
Jamaica	35
Nigeria	28
Costa Rica	28
Others	95
Total	634

Source: Jim Jordan and Associates

U.S. Fuel Ethanol Imports



Source: Jim Jordan and Associates
*estimated for December 2004



RENEWABLE FUELS ASSOCIATION

The Renewable Fuels Association (RFA) was founded in 1981 as the national trade association for the U.S. fuel ethanol industry. The RFA serves as a vital link between the ethanol industry and the federal government, including the Congress and Administration, to promote increased production and use of ethanol through supportive policies, regulations, and research & development initiatives. The RFA also works with state governments,

the agriculture, petroleum and transportation industries, environmental and public interest groups, and ethanol advocates across the country.

The RFA is recognized nationwide as a highly effective and professional organization dedicated to the continued vitality and growth of ethanol in the fuel marketplace. The RFA hosts the annual National Ethanol Conference: Policy & Marketing.

OBJECTIVES

- Promote federal, state and local government policies, programs and initiatives that encourage expanded ethanol use
- Provide technically accurate and timely information to auto manufacturers and technicians, the media, policy makers, marketers and refiners, and the general public
- Participate in educational activities to increase public awareness regarding renewable fuels and the positive contribution they make to American energy independence, the economy and the environment
- Provide members with the information necessary for informed business decisions

MEMBERSHIP

RFA membership includes a broad cross-section of businesses and organizations dedicated to the expansion of the U.S. fuel ethanol industry. Membership includes Producer Members (public and private companies and farmer-owned cooperatives), Prospective Producer Members (plants under construction and development), Associate Members (companies that provide products and services to the industry) and Supporting Members (non-profit organizations, academia and government entities).

A Board of Directors comprised of a representative from each producer member governs the RFA. The Board meets several times a year to set Association policy. RFA producer members represent 90% of U.S. fuel ethanol production.

BENEFITS OF MEMBERSHIP

Benefits of membership include providing input on RFA policies, activities and priorities through participation in RFA meetings, timely industry alerts and issue briefs, industry publications and studies, the Ethanol Report newsletter, access to technical guidelines and specifications for plant operations and blending, reduced registration fee for the National Ethanol Conference, and links from the RFA web site.

RFA COMMITTEES

- Technical Committee
- Education & Promotion Committee
- Safety Committee
- Fuel Cell Task Force
- Founding Member, E diesel™ Consortium
- Founding Member, Feed Co-Products Working Group together with the National Corn Growers Association

More information about the RFA, including a detailed list of membership benefits, can be obtained by contacting the RFA or visiting the RFA web site at www.ethanolRFA.org.



RFA Prospective Producer Members:

Central Indiana Ethanol, LLC Sweetser, IN
Dakota Renewable Fuels, LLC Fargo, ND www.ndcorn.com
Empire Biofuels, LLC Newark, NY www.empirebiofuelsny.com
Iogen Corp. Ottawa, ON Canada www.iogen.ca
Masada Oxynol, LLC Vestavia Hills, AL www.masada.com
Mid-Missouri Energy Malta Bend, MO www.midmissourienergy.com
North American Alcohols, Inc. Wellington, FL
Otter Creek Ethanol, LLC Ashton, IA www.ottercreekethanol.com
Rocky Mountain Ethanol, LLC Billings, MT
Sioux River Ethanol Hudson, SD www.siouxriverethanol.com
Western Wisconsin Renewable Energy Co-op Wheeler, WI www.wvrecethanol.com

RFA Associate Members:

AgStar Financial Services Mankato, MN www.agstar.com
Alfa Laval, Inc. Richmond, VA www.alfalaval.com
Alltech Biotechnology Nicholasville, KY www.alltech.com
Astle Corp. Deer Creek, MN www.astlecorp.com
Attebury Grain, Inc. Amarillo, TX www.attebury.com
BBI International Cotopaxi, CO www.bbibiofuels.com
Bratney Companies Des Moines, IA www.bratney.com
Brenntag Great Lakes, LLC Wauwatosa, WI www.brenntaggreatlakes.com
BRI Energy, Inc. New Smyrna Beach, FL www.brienergy.com
Brown, Winick, Graves Des Moines, IA www.ialawyers.com
Byrne & Company Limited Preston, MN www.byrneltd.com
California Renewable Fuels Council Placentia, CA
Christianson & Associates, PLLP Willmar, MN www.christiansoncpa.com
CoBank Denver, CO www.cobank.com
Commercial Alcohols, Inc. Toronto, ON Canada www.comalc.com
Commodity Specialists Company Minneapolis, MN www.csc-world.com
Delta-T Corporation Williamsburg, VA www.deltatcorp.com
Dorsey & Whitney, LLP Washington, DC www.dorsey.com
Eco-Energy, Inc. Franklin, TN www.eco-energyinc.com
Ethanol Products, LLC Wichita, KS www.ethanolproducts.com
Fagen, Inc. Granite Falls, MN www.fageninc.com
FCStone, LLC West Des Moines, IA www.fcstone.com
First Capitol Group, LLC Platteville, WI www.efutures.com
Fremont Industries, Inc. Shakopee, MN www.fremontind.com
GATX Rail Chicago, IL www.gatx.com
Genencor International, Inc. Rochester, NY www.genencor.com
Grace Davison Columbia, MD www.gracedavison.com
Greenstock Resources, Inc. Newark, NY www.greenstock.net
GROWMARK, Inc. Bloomington, IL www.growmark.com
Hays Companies Minneapolis, MN www.hayscompanies.com
ICM, Inc. Colwich, KS www.icminc.com
Kinergy, LLC Davis, CA
Kleinfelder, Inc. Parker, CO www.kleinfelder.com
KMA Consulting Burnsville, MN www.kma-inc.net
Land O'Lakes Farmland Feed, LLC Shoreview, MN www.landolakes.com
Lansing Grain Company, LLC Overland Park, KS www.lansinggrain.com
Lesaffre Yeast Corporation Milwaukee, WI www.lesaffreyeastcorp.com
Lindquist & Vennum, PLLP Minneapolis, MN www.lindquist.com
Lubrizol Corporation Wickliffe, OH www.lubrizol.com
Lurgi PSI, Inc. Memphis, TN www.lurgipsi.com
Monsanto St. Louis, MO www.monsanto.com
National Corn Growers Association Chesterfield, MO www.ncga.com
National Grain Sorghum Producers Lubbock, TX www.sorghumgrowers.com
North America Bioproducts Corp. Lawrenceville, GA www.na-bio.com
Novozymes North America, Inc. Franklinton, NC www.novozymes.com
O2Diesel, Inc. Newark, DE www.o2diesel.net
Octel Starreon LLC Littleton, CO www.octelstarreon.com

Pioneer, A DuPont Company Johnston, IA www.pioneer.com
Plains Marketing, LP Omaha, NE www.paalp.com
Renewable Products Marketing Group Belle Plaine, MN www.rpmgllc.com
The Rice Company - Krohn Division Roseville, CA www.riceco.com
The Scouler Company Overland Park, KS www.scouler.com
Stoel Rives, LLP Portland, OR www.stoel.com
Syngenta Greensboro, NC www.syngenta.com
Tranter PHE, Inc. Wichita Falls, TX www.tranter.com
Trinity Rail Group, LLC Dallas, TX www.trinityrail.com
United Bio Energy, LLC Wichita, KS www.unitedbioenergy.com
US BioEnergy Brookings, SD www.usbioenergy.net
U.S. Development Group Pasadena, TX www.us-dev.com
U.S. Energy Services, Inc. Wayzata, MN www.usenergyservices.com
U.S. Water Services Cambridge, MN www.uswaterservices.com
Wittig Energy Resources, LLC McPherson, KS www.wittigtransport.com

RFA Supporting Members:

Clean Fleets Coalition Sacramento, CA
Coloradans for Clean Air Denver, CO
Corn Marketing Program of Michigan DeWitt, MI www.micorn.org
DFI Group Raleigh, NC www.dfigroup.com
Distillers Grains Technology Council Louisville, KY www.distillersgrains.org
Downstream Alternatives South Bend, IN
Dumas Economic Development Corp. Dumas, TX
Ethanol General Corp. Canoga Park, CA
Ethanol Producers and Consumers Nashua, MT www.ethanolmt.org
Illinois Corn Growers Association Bloomington, IL www.ilcorn.org
Iowa Renewable Fuels Association Johnston, IA www.iowaRFA.org
Iowa State University Ames, IA www.iastate.edu
Kansas Association of Ethanol Processors Topeka, KS www.kansasag.org
Michigan State University – Department of Agricultural Economics
East Lansing, MI www.aec.msu.edu/agecon
Minnesota Department of Agriculture St. Paul, MN
www.mda.state.mn.us/ethanol
Missouri Corn Growers Association Jefferson City, MO www.mocorn.org
Nebraska Public Power District Lincoln, NE www.ethanolsites.com
New Madrid County Port Authority New Madrid, MO
Ohio Corn Marketing Program Marion, OH www.ohiocorn.org
REDDI Harrisburg, PA www.reddionline.com
Renewable Fuels Australia Kingston, ACT Australia
South Dakota Corn Growers Association Sioux Falls, SD www.sdcorn.org
Steele-Waseca Cooperative Electric Owatonna, MN www.swce.coop
Texas Renewable Energy Industries Association Austin, TX www.treia.org
University of California – Davis Desert Research and Extension Center
Davis, CA www.ucdavis.edu
Western Area Power Administration Lakewood, CO www.repartners.org
Western Petroleum Co. Eden Prairie, MN www.westernpetro.com

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(as of January 25, 2005)



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