

Renew Kansas
(Previously Kansas Association of Ethanol
Processors)

Kansas Ethanol 101

January 25, 2016



ethanol

Put a little Kansas in your tank.



ethanol-enriched fuel



- good for your car
- good for the environment
- good for Kansas

Renew Kansas



ethanol facts:

What is Ethanol?

- A renewable, domestically-produced, alcohol fuel created by fermenting grain or plant materials such as corn, milo, grass, biomass
- One bushel of corn produces up to 2.9 gallons of ethanol



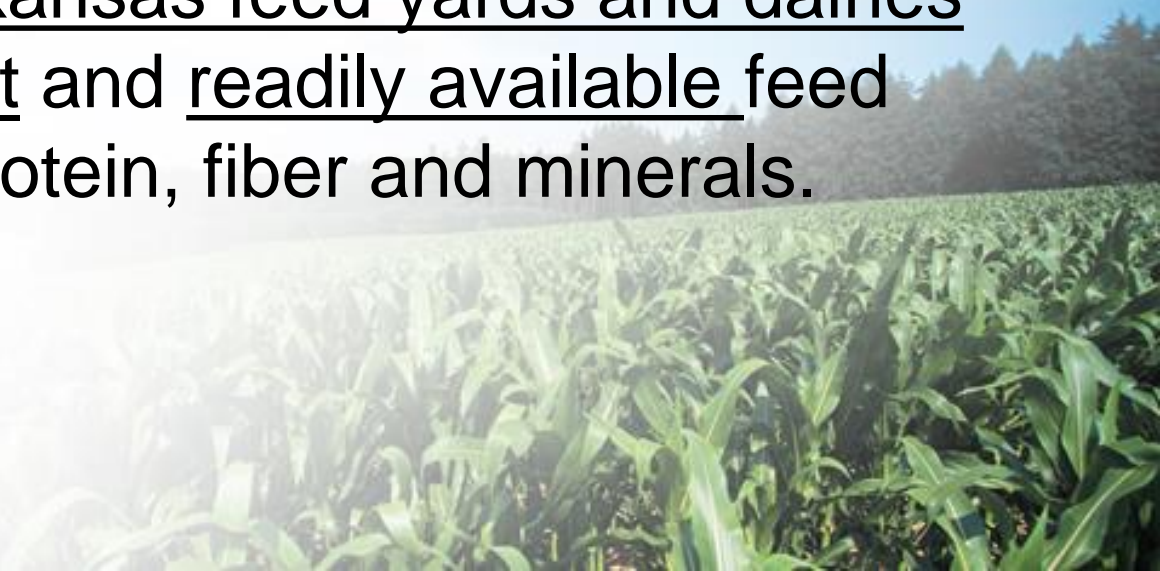


ethanol facts:

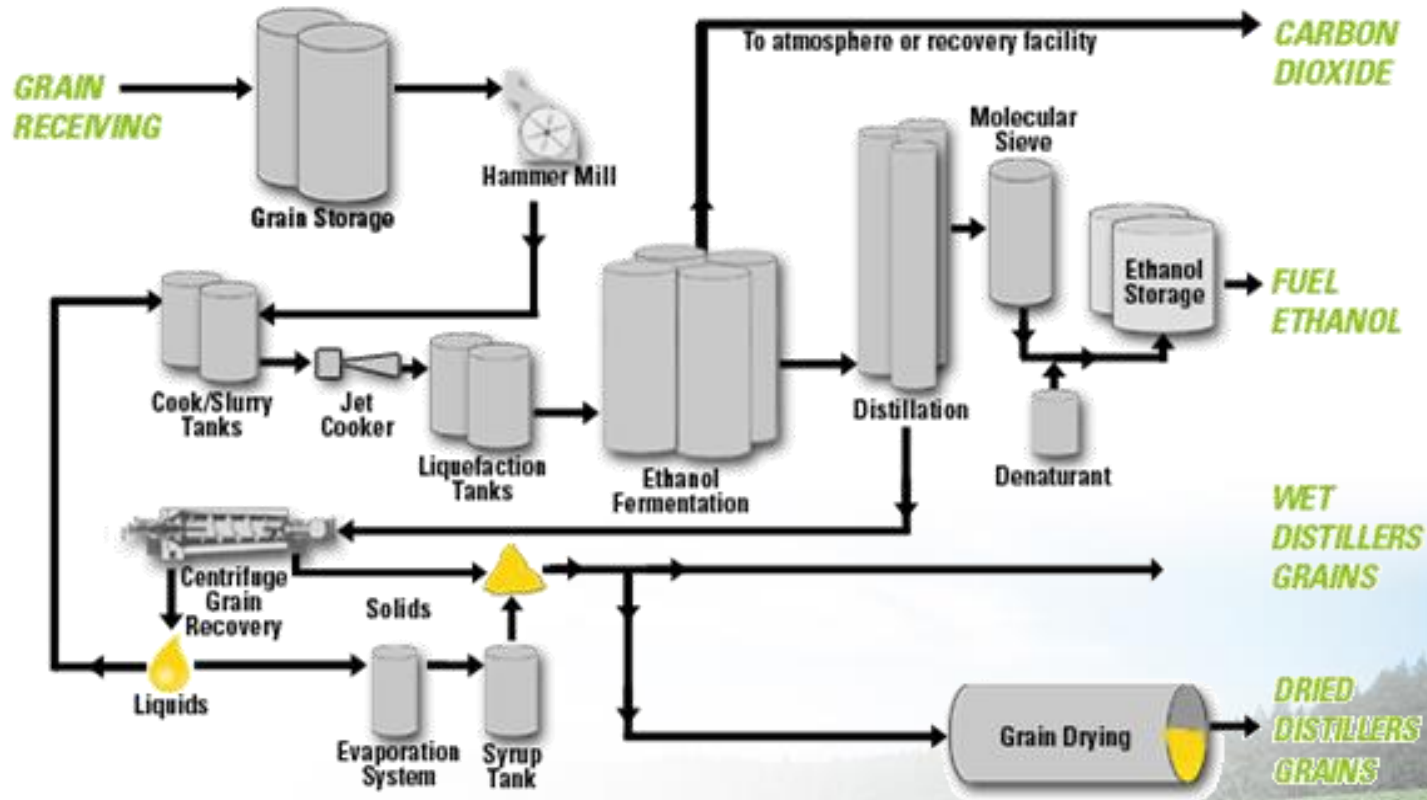
Dried Distillers Grains (DDGs)

As an ethanol co-product, each bushel of corn also produces about 17 pounds of dried distillers grains (DDGs) feed meal – less if the oil is removed for biodiesel

DDGs provide Kansas feed yards and dairies with a consistent and readily available feed source rich in protein, fiber and minerals.



The Process





Kansas ethanol

Kansas Ethanol Industry

- 12 processing plants
- Most came online between 1997 - 2007
- Capacity to produce approx. 445 million gallons of ethanol annually
- 2 plants recently shut down: Abengoa plants in Hugoton (Biomass) and Colwich





Kansas ethanol

Kansas Ethanol Plants

1. **Conestoga Energy Partners**, *Arkalon*
2. **Conestoga Energy Partners**, *Bonanza/Garden City*
3. **Reeve Agri-Energy**, *Garden City*
4. **Kansas Ethanol**, *Lyons*
5. **White Energy**, *Russell*
6. **Western Plains Energy**, *Oakley*
7. **Prairie Horizon Agri Energy**, *Phillipsburg*
8. **East Kansas Agri-Energy**, *Garnett*
9. **NESIKA**, *Scandia*
10. **Pratt Energy, LLC**, *Pratt*
11. **MGP Ingredients**, *Atchison* (food grade alcohol)
12. **ESE Alcohol**, *Leoti*



E10 and your car



- E10: 10% ethanol, 90% gasoline
- Most available ethanol-blend fuel today
- All cars/trucks manufactured in the last 15 years are built and warranted for E10
- No harm to tanks, lines, pumps or filters
- Saves motorists on fuel prices
- Approved for use in most small engines*

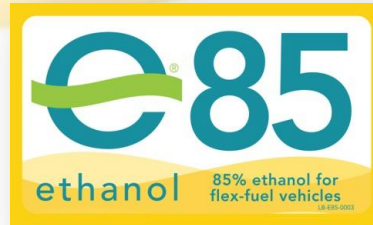


E15 and your car

- E15: 15% ethanol, 85% gasoline
- Approved for use in all 2001 and newer cars and trucks
- Approved for use in 80% of the cars on the road today, and over 95% by 2020
- E15 is a fuel choice, not a mandate
- Slightly less fuel economy than E10
- Not approved for 2-stroke engines



E85 and your car

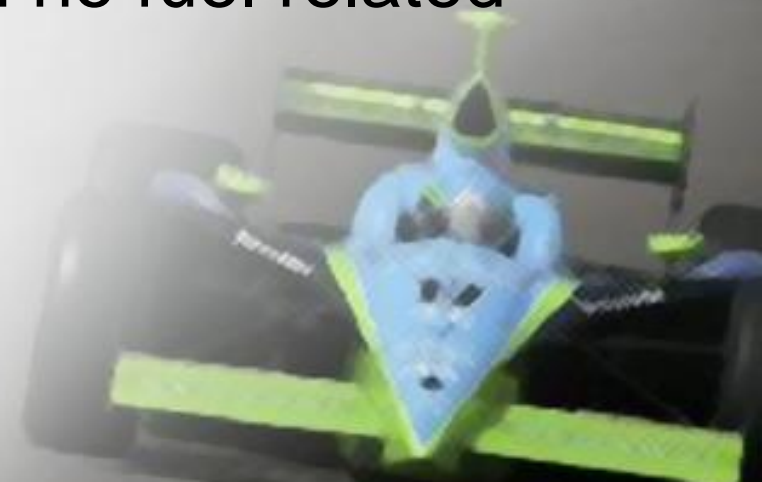


- E85: 85% ethanol, 15% gasoline
- Used only in **Flex-Fuel** vehicles (FFVs)
- Cleanest burning U.S. motor fuel
- Historically 20-30 cents cheaper than gasoline
- Less fuel economy than E10 or E15
- Approx. 65 E85 fueling stations in Kansas
- 16 million FFVs in the U.S. today



Ethanol powers IndyCar[®] and NASCAR

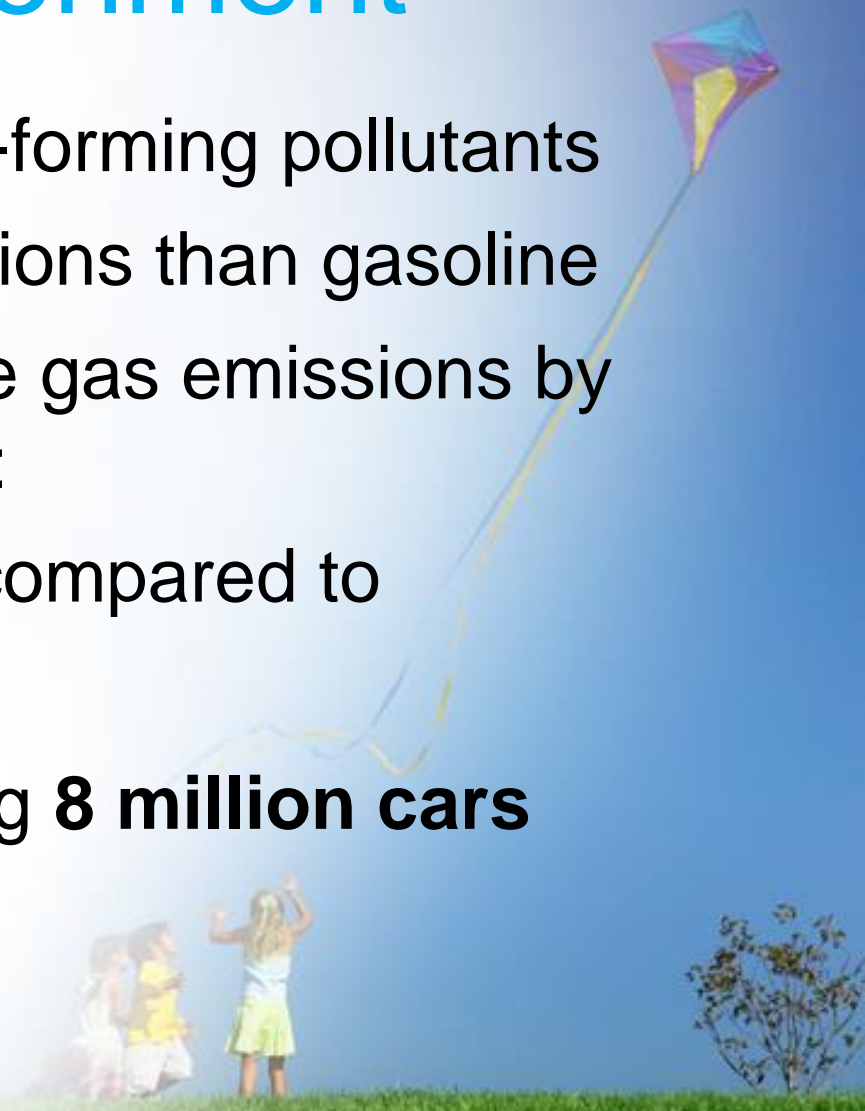
- *IndyCar*[®] switched to 100% ethanol in 2007
- *NASCAR* began racing with E15 in 2011
- More than 7 million *NASCAR* miles have been driven using E15, with no fuel related mechanical issues reported
- 15 trips around the moon





Good for the environment

- Ethanol reduces ozone-forming pollutants
- 30% less tailpipe emissions than gasoline
- Decreases green-house gas emissions by **38 million metric tons:**
 - a **reduction of 57%** compared to regular gasoline
 - equivalent to removing **8 million cars** from the road





Good for America

- Corn ethanol benefits farmers and rural economies
- Without ethanol, corn would struggle to maintain its current price of \$3.40/bu
- Sub-\$3.00/bu corn would devastate farmers, rural communities, land value, ag lenders, local taxing authorities, and state revenues





Good for America

In 2013, the ethanol industry:

- Sustained nearly **400,000 jobs**
- Contributed **\$44 billion** to the US GDP
- Added **\$31 billion** to household incomes





Good for Kansas

Kansas ethanol production annually provides:

- over \$2 million in real property taxes*
- \$100,000 in personal property taxes*
- \$53 million in trucking fees
- 384 direct jobs, average salary of \$49,000

**Stands to increase as plants continue to roll off local property tax abatements.*

(2010 Kansas Legislative Research Dept. Report)



Good for Kansas

Each ethanol plant enhances rural Kansas:

- Annually purchases average of 14.5 million bushels of grain from local farmers (valued at over \$680 million in 2008)
- Produces ready access to wet and dry distillers grains feed for Kansas livestock producers, dairies, and feed yards – a KEY synergy in the Kansas cattle industry.

(2010 Kansas Legislative Research Dept. Report)



Good for Kansas

***Construction of each 100 mg ethanol plant results in:**

- \$150 million in capital investments
- \$68 million on construction, start-up
- \$70 million to the local economy
- \$233 million expansion of economic base
- \$3.2 million per year in tax revenues
- 45 direct jobs and 101 local indirect jobs

(2010 Kansas Legislative Research Dept. Report)



Future of Ethanol

New technologies:

- improved energy/production efficiencies
- more efficient use of water
- extract more from each kernel of grain

USDA report shows:

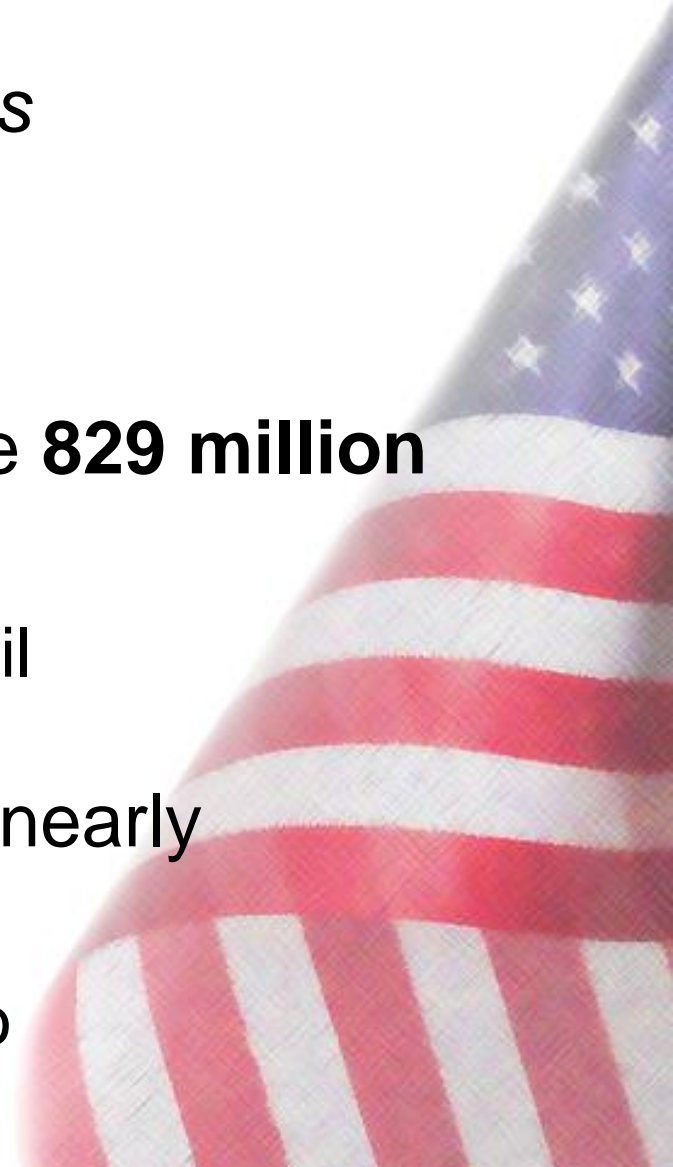
- ethanol processing is a net-positive system
- each Btu input has a **2.3 Btu return**
- *more energy efficient* to produce than gasoline



Future of Ethanol

Export Market: *Setting records*

- Future of the ethanol industry
- 2014 US ethanol exports were **829 million gallons**
 - India, Canada and Brazil
- 2014 US DDGs exports were nearly **11 million metric tons**
 - China, Canada, Mexico





Ethanol Challenges

- Increasing the Kansas ethanol market though promotion of E15 and Flex Fuels
- Increasing ethanol availability for travelers on Kansas interstates
- Market access is key to future of ethanol and all biofuels: Better Blends Initiative



Ethanol Opportunities

WHAT IS THE KANSAS BETTER BLENDS INITIATIVE?

The Kansas Better Blends Initiative (KBBI) is an alliance of key partners in the ethanol industry. Together, we will increase the availability of ethanol products in Kansas. We believe that providing access to clean, efficient and home-grown fuel is essential to improving our economy and our environment. **KBBI will make available \$2.23 million directly to retailers for installation of new or retrofit equipment.**

WHAT'S IN IT FOR FUEL RETAILERS?

- KBBI will provide awards covering **up to 90% of the installation cost of blender pumps**
- KBBI funds will also cover **up to 75% of the cost of single-use E15 pumps**
- KBBI will help promote through a grand opening and other educational activities
- KBBI will provide funds to increase the visibility of ethanol fuels at participating stations
- The effort will target high-volume retailers and those in high-traffic, high-visibility areas



For Additional Information:

www.renewkansas.com

Renew Kansas