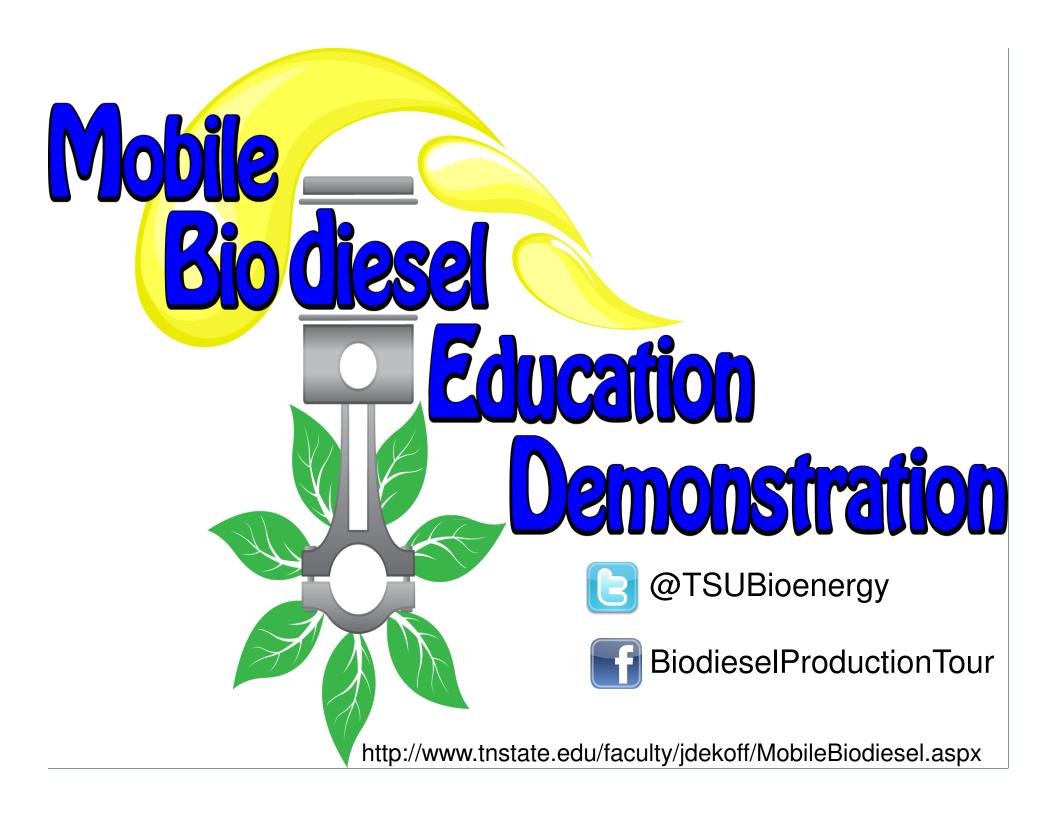
## **Biodiesel Production**

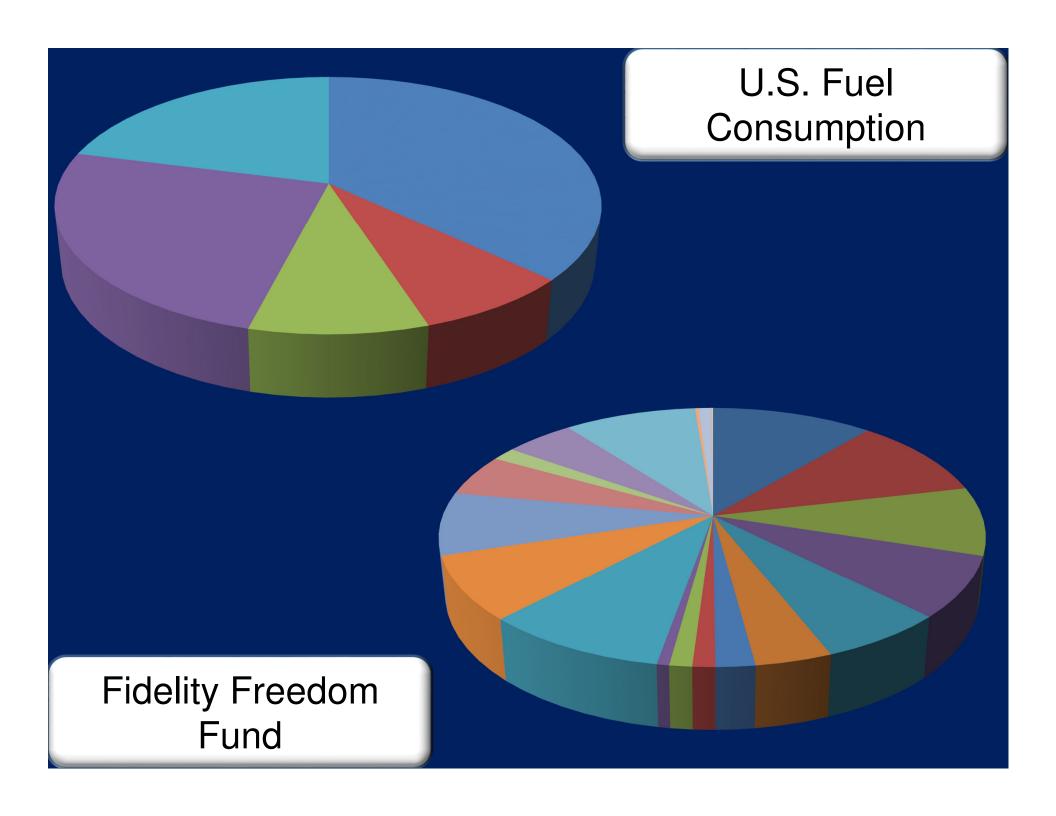




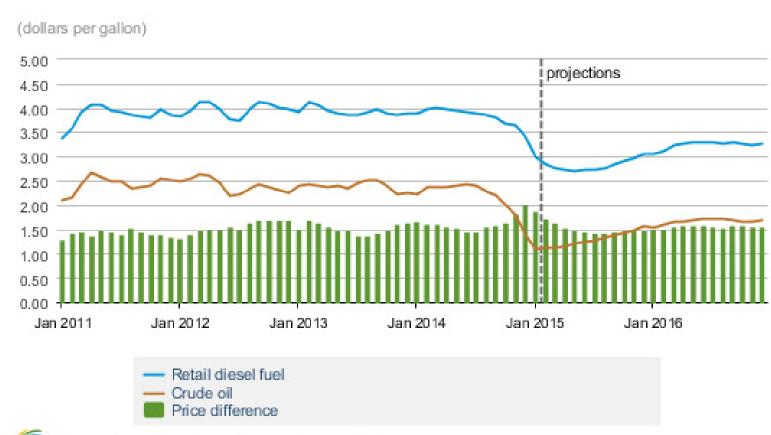
Dr. Jason de Koff Extension Specialist – Agronomy and Soils







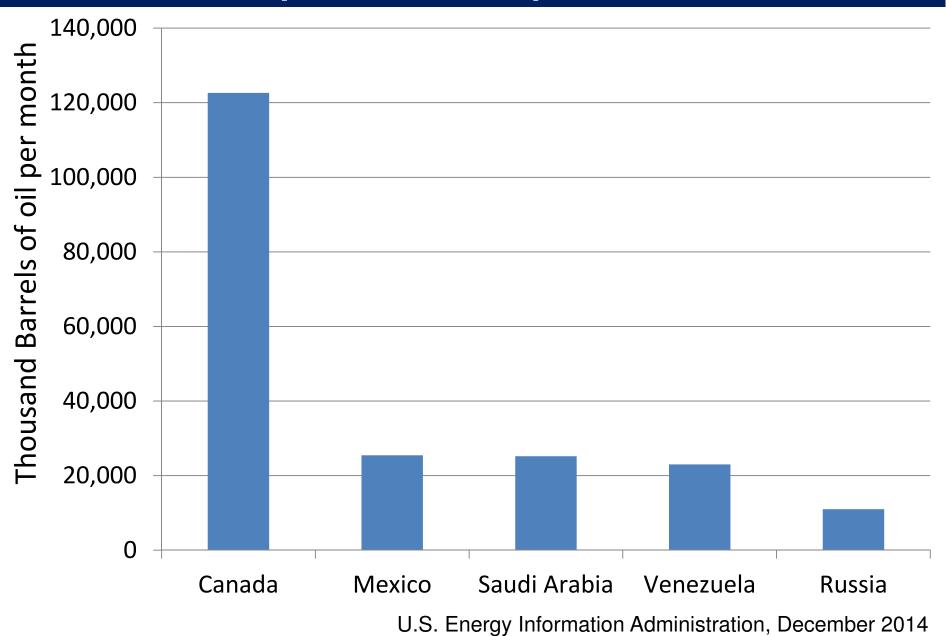
#### U.S. Diesel Fuel and Crude Oil Prices



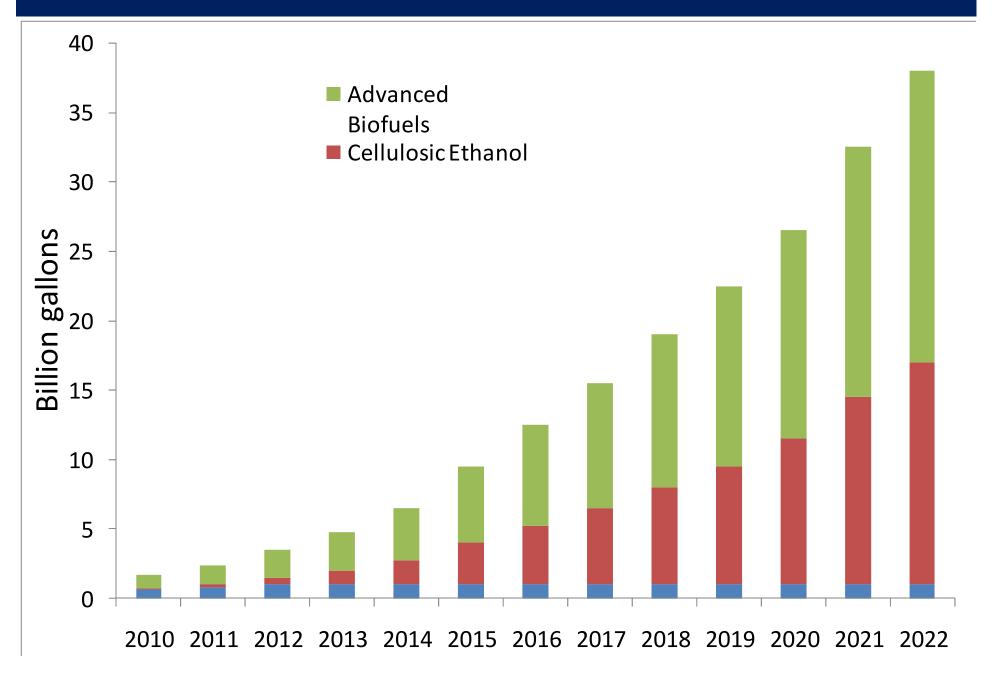
eia Source: Short-Term Energy Outlook, February 2015

Crude oil price is composite refiner acquisition cost. Retail prices include state and federal taxes.

## Top 5 Oil Importers

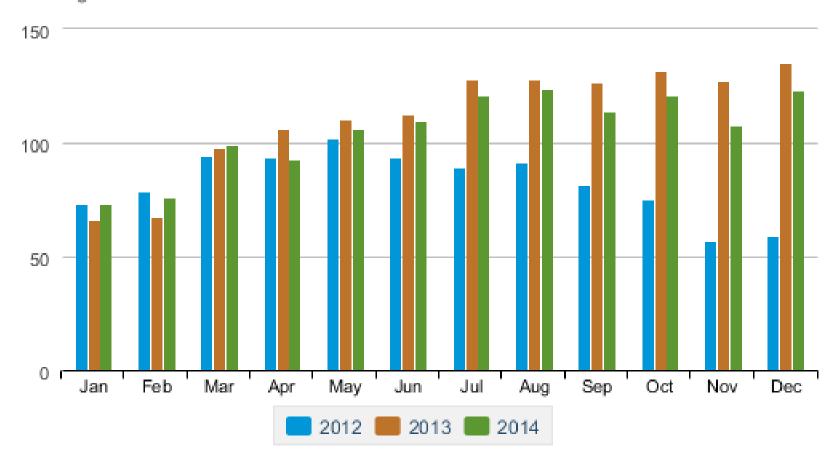


## Renewable Fuels Standard



#### U.S. monthly biodiesel production 2012 - 2014

#### million gallons



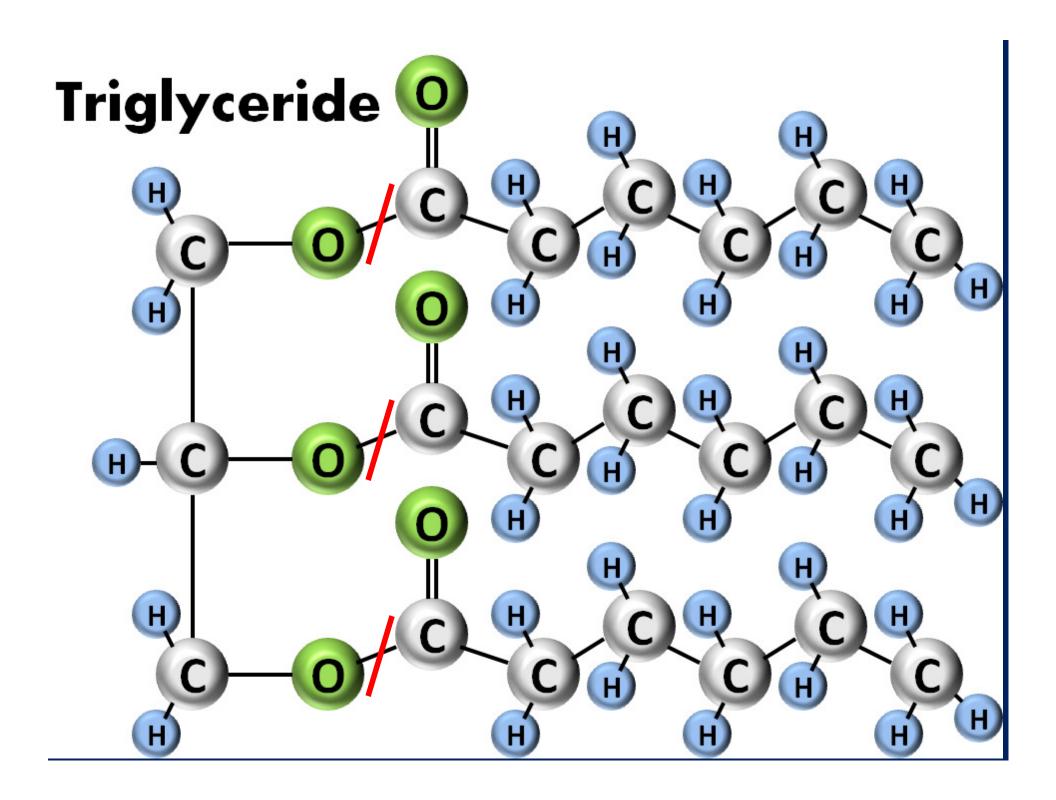


U.S. Energy Information Administration, Form EIA-22M Biodiesel Monthly Survey.

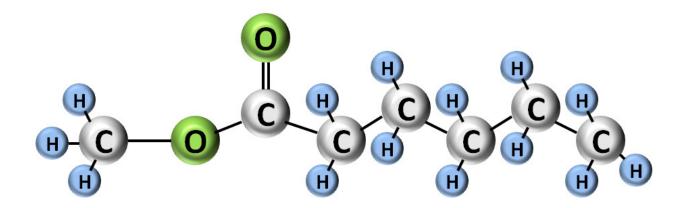
# Biodiesel production

Transesterification

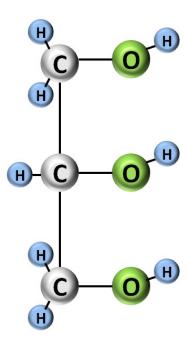




### **Biodiesel**

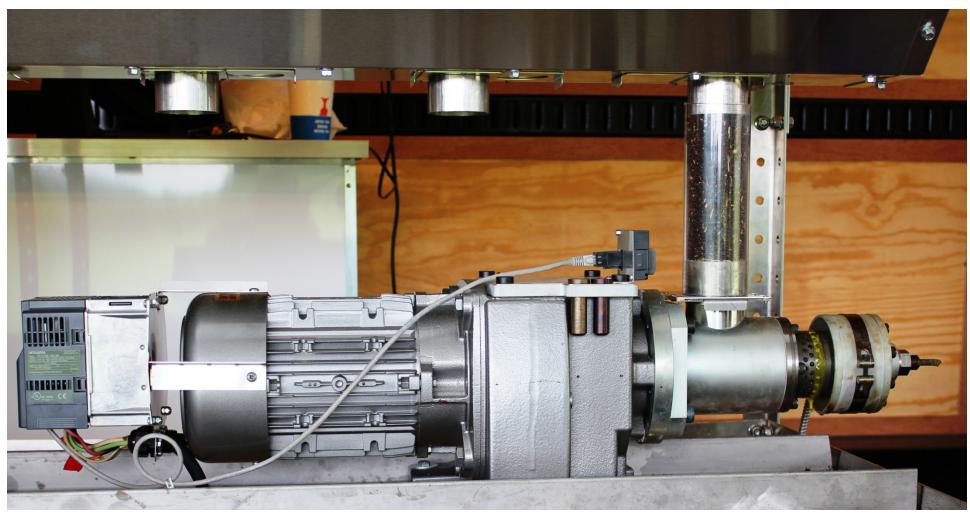


**Glycerol** 





### Oil seed press



Gemco Energy (China) KOMET (Germany) Oil Press Co. (USA)

#### Biodiesel processor







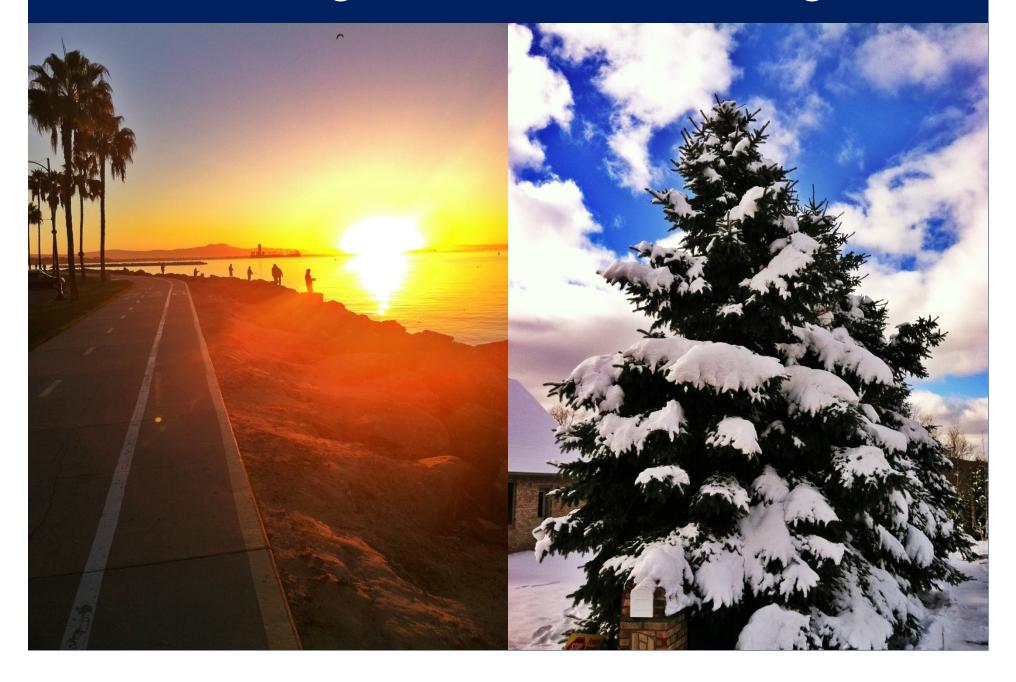


Onsite Energy
Biodiesel123

<u>Evolution</u> biodiesel

- How many gallons can be processed per batch?
- How long does each batch take to process?
- Is the system capable of heating the oil and/or the alcohol-catalyst mixture?
- Does the system include methanol recovery equipment? Methanol transfer system? Test kits?
- Does the system have the capability to wash and dry the biodiesel?
- Does the system require any extra plumbing, fittings or pumps?
- Does the system require that a specific catalyst be used?
- Does the manufacturer provide technical support?

## Advantages and Disadvantages



### **Further information**

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http://www.tnstate.edu/extension/publication\_index.aspx

http://www.extension.org/ag\_energy