

**ACEEE**

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*Jamie Derr*

**Derr Farms Inc./ Great Lakes Ag Energy**

***BioFuels***

***Challenges &  
Opportunities***

# Home Grown Fuel



- **Energy Independence**
- **Rural Development**
- **Sustainable Agriculture**

# Energy Efficiency

- Wisconsin Farmers Union Energy Audit Program 2008
- Wisconsin Focus on Energy Program
- Carbon Credit Registration / No-till farming
- Petroleum Diesel Replacement
- Net Zero Farms

# On-Farm Oilseed Processing









# Small Scale Biodiesel Production



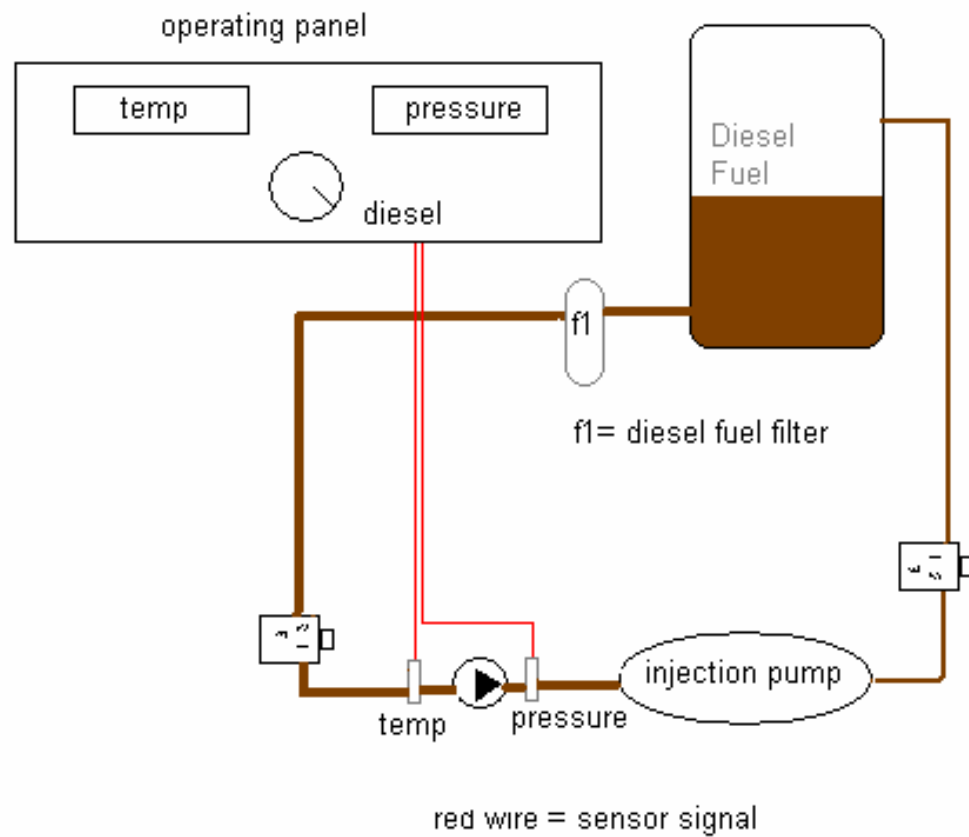


# Tractor Conversions

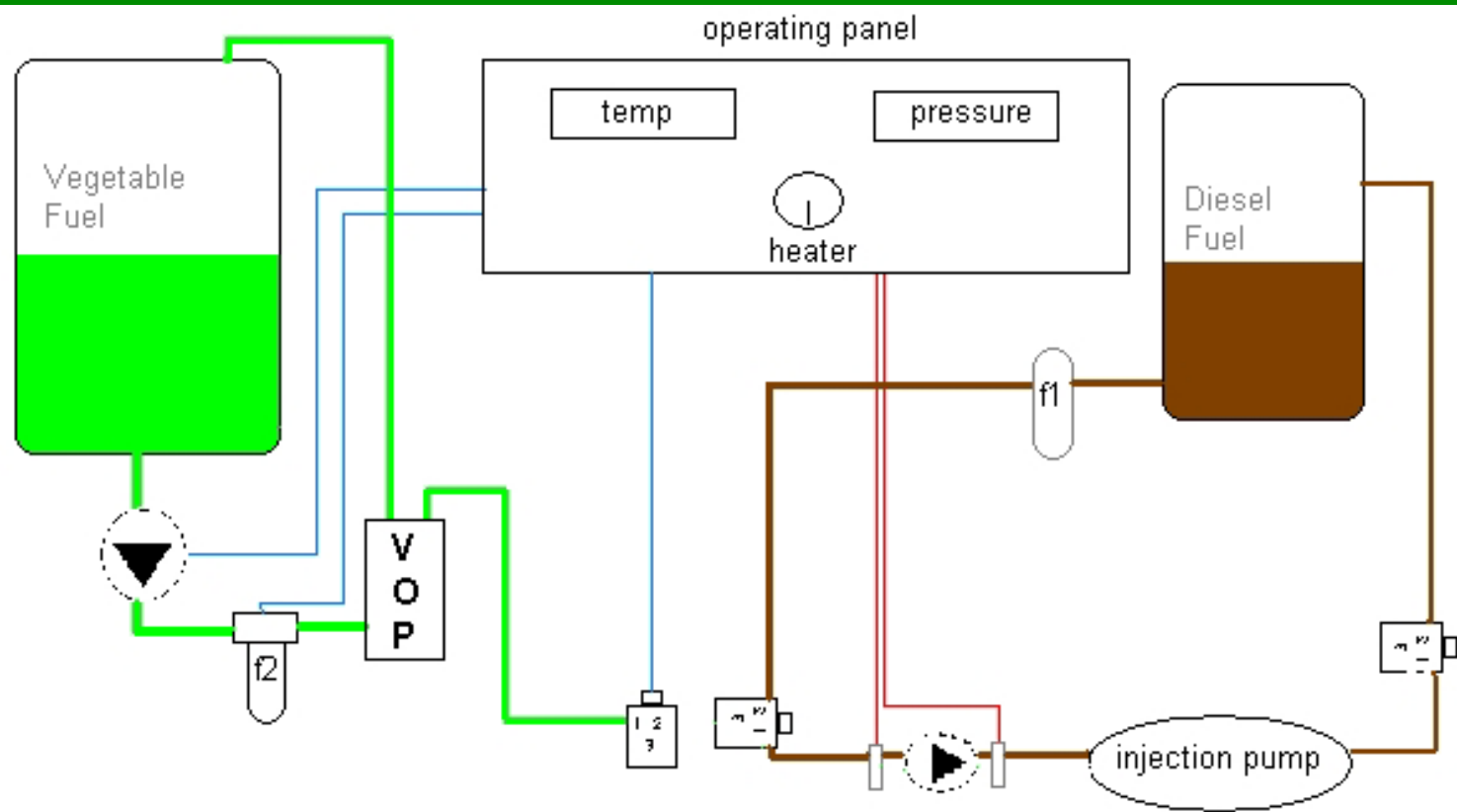


# Start the engine on diesel...

diesel modus



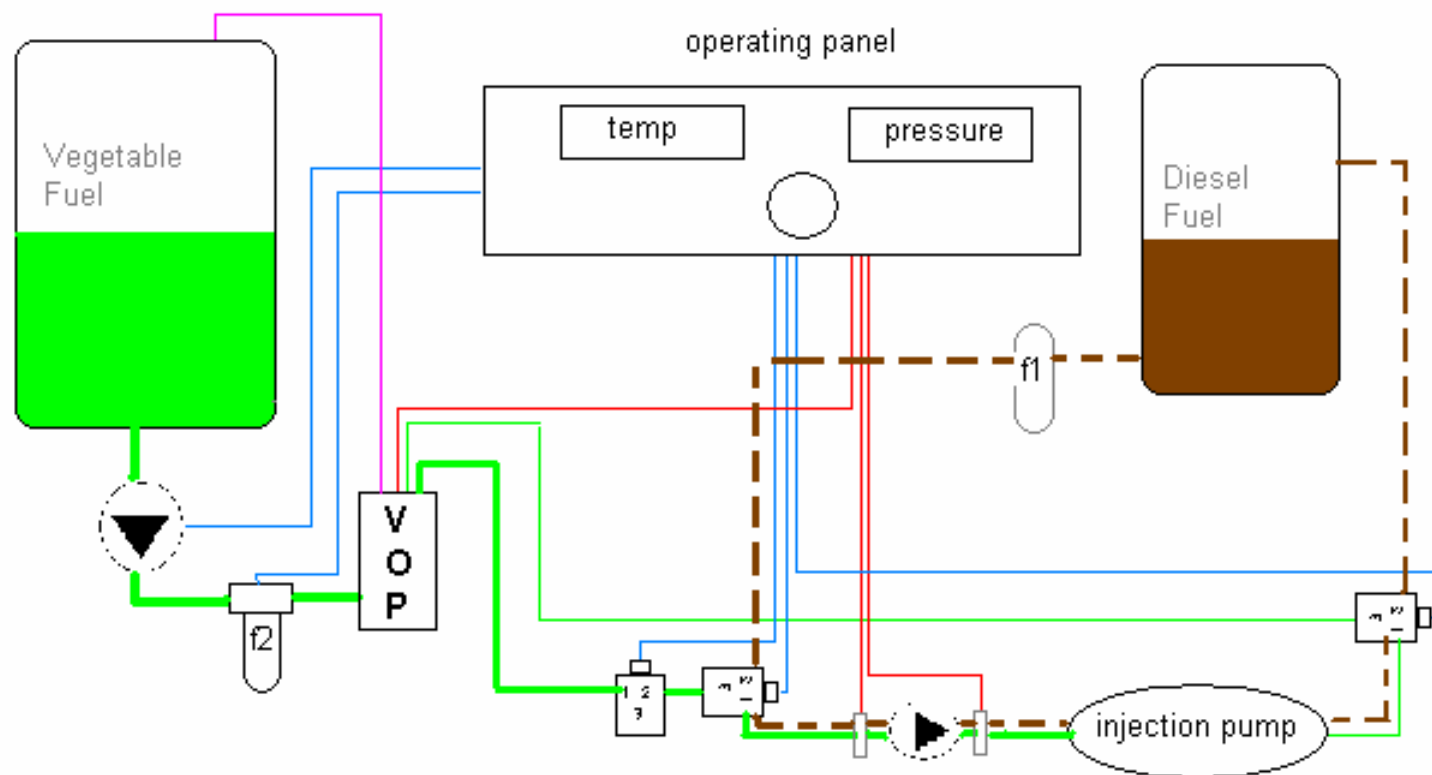
# SVO warm up



preperation for vegetableoil using

blue wire = 12VDC  
red wire = sensor signal

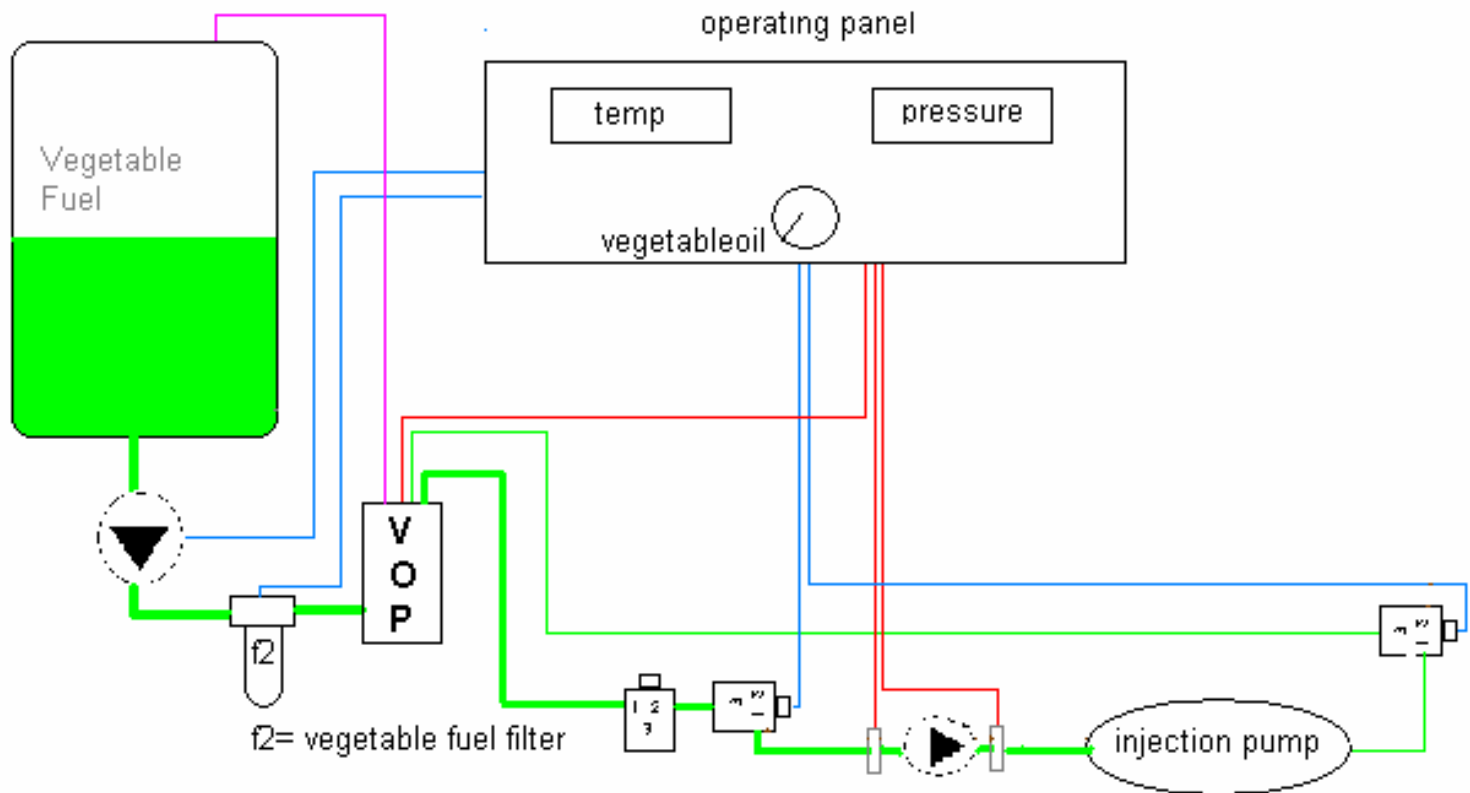
# SVO engaged



f1= diesel fuel filter  
f2= vegetable fuel filter  
VOP= vegetable oil preparer

blue wire = 12VDC  
red wire = sensor signal

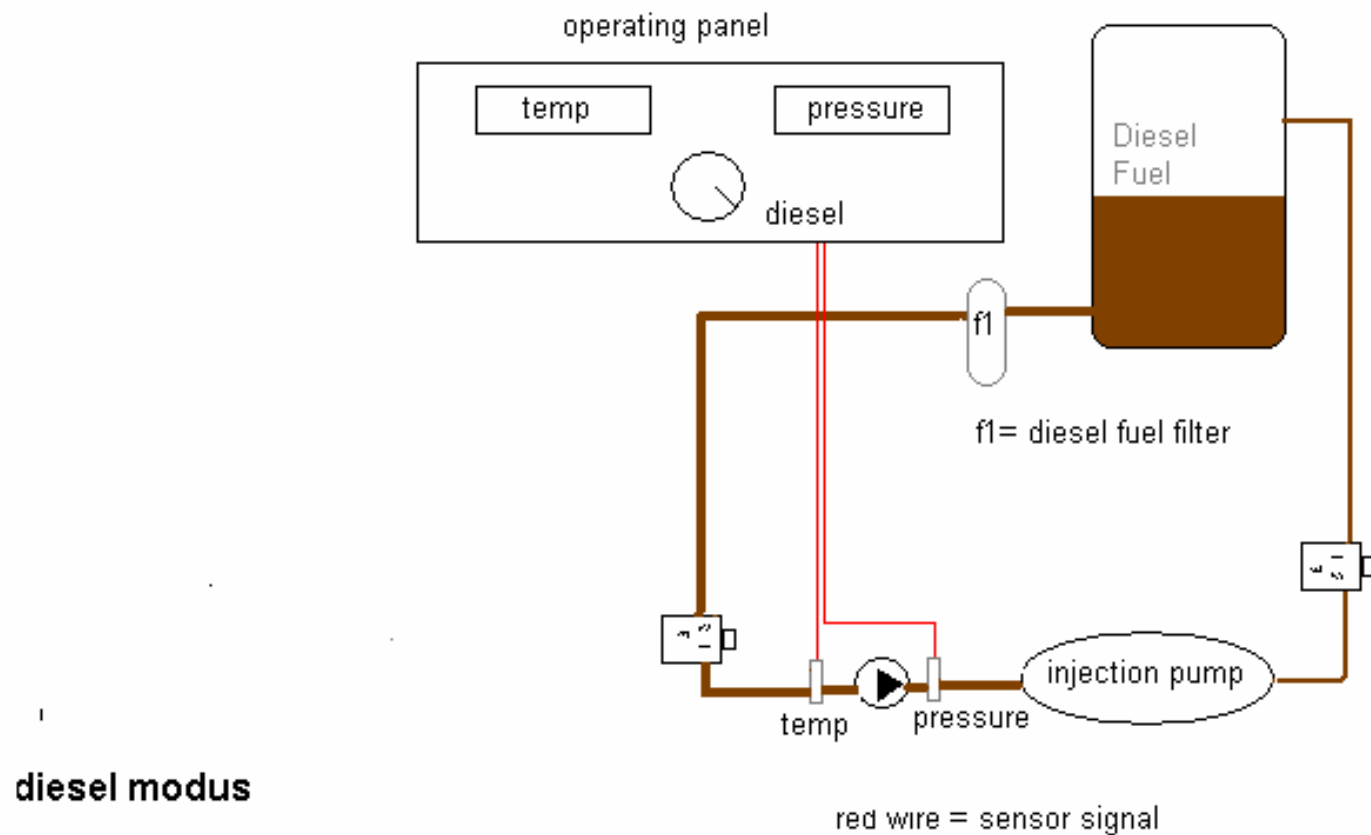
# SVO only mode



**vegetableoil modus**

blue wire = 12VDC  
red wire = sensor signal

# Shut back down on diesel (purge)



**Derr Farms  
Canola Test Plot  
Dane County, June 2006**



# Feedstock Economics

- Current CBOT Value of \$.55 / lb. makes stand alone RBD refinery **UNECONOMIC**
- Oil production On-Farm allows grower pricing Flexibility
- Oil value even with Diesel fuel
- On-Farm processing may not be cheaper but far more secure



# High Value Co-products

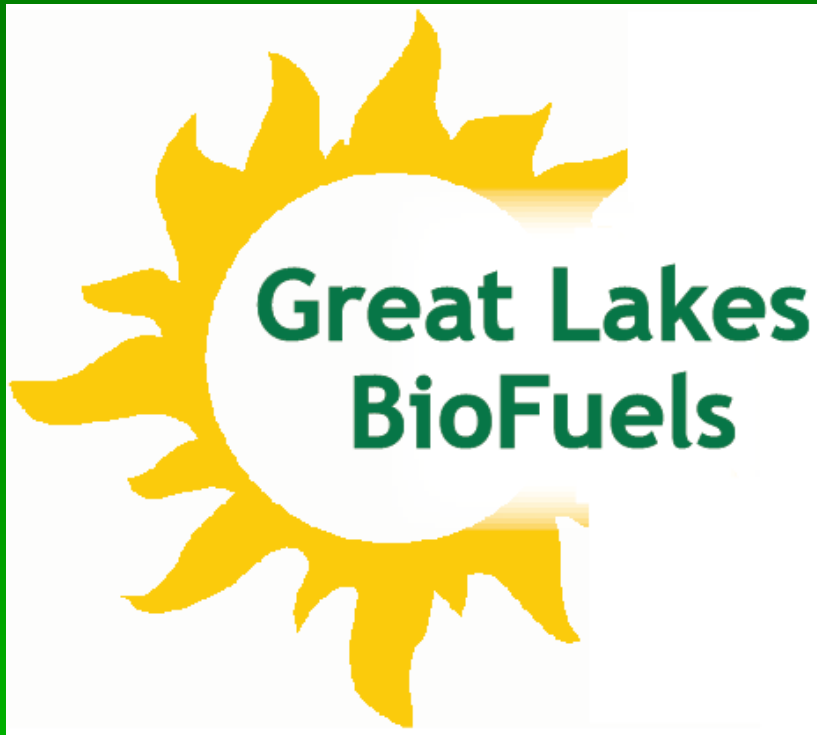
- Soybean meal must be roasted to increase value ( \$100/ ton )
- De-gumming necessary for SVO, helpful for Biodiesel
- Canola meal and oil of high quality right off the press
- Sunflower pellets almost at burn value

# Prairie Fire BioFuel Coop

[www.prairiefirebiofuels.org](http://www.prairiefirebiofuels.org)



- Wisconsin-based
- Educational, membership organization
- Discounted fuel & mechanical work
- E. Washington Ave. shop
- \$150/year to join



***- Fuel for today  
and tomorrow.***

Jamie Derr  
Derr Farms Inc.  
1415 Greenway Rd.  
Marshall, WI 53559 (608) 333-2463  
[www.greatlakesbiofuels.com](http://www.greatlakesbiofuels.com)