



# Oilseeds and On-Farm Biodiesel Resources

## Oilseed Crop Information

### ***Soybeans***

National Soybean Research Laboratory: <http://www.nsrl.uiuc.edu>

United Soybean: <http://www.unitedsoybean.org>

North Dakota State University: <http://www.ag.ndsu.edu/procrop/syb/index.htm>

Growing Soybeans in the Champlain Valley – Cornell Coop Extension:  
<http://counties.cce.cornell.edu/clinton/ag/soybeans>

### ***Canola***

Canola Council of Canada: <http://www.canola-council.org/portal.html>  
<http://www.canola-council.org/PDF/canolamealbkgrndmarket.pdf#zoom=100>

Purdue University: <http://www.ces.purdue.edu/extmedia/AY/AY-272.html>

North Dakota State University:  
[http://www.ag.ndsu.nodak.edu/carringt/99data/canola\\_economics.htm](http://www.ag.ndsu.nodak.edu/carringt/99data/canola_economics.htm)

University of Maine Extension:  
<http://www.umext.maine.edu/onlinepubs/htmlpubs/2438.htm>

### ***Sunflowers***

Purdue University: <http://www.hort.purdue.edu/newcrop/afcm/sunflower.html>

Jefferson Institute: <http://www.jeffersoninstitute.org/pubs/sunflower.shtml>

North Dakota State University: <http://www.ag.ndsu.nodak.edu/carringt/livestock/Beef%20Report%2002/sunflower%20meal.htm>

### ***Sweet Sorghum***

Though not an oilseed, sweet sorghum is being grown in Vermont in order to produce alcohol, a primary ingredient in making biodiesel.

University of Kentucky: <http://www.ca.uky.edu/agc/pubs/agr/agr122/agr122.htm>



Purdue University: <http://www.hort.purdue.edu/newcrop/afcm/syrup.html>

Sweet Sorghum Seed: <http://www.ca.uky.edu/nssppa/production.html#seed>

## Oilseed Processing Information

### ***Oilseed Organizations***

National Sustainable Agriculture Information Service: [www.attra.ncat.org](http://www.attra.ncat.org)

Georgia Oilseed Cooperative: [www.emergingcrops.org/farmersoilseed/feasibility.asp](http://www.emergingcrops.org/farmersoilseed/feasibility.asp)

### ***Articles***

How to Process Oilseed on a Small Scale:

[www.howtopedia.org/en/How\\_to\\_Process\\_Oilseed\\_on\\_a\\_Small\\_Scale](http://www.howtopedia.org/en/How_to_Process_Oilseed_on_a_Small_Scale)

Small-scale Oilseed Processing – Value-added and Processing Guide:

[www.green-trust.org/2000/biofuel/oilseed.pdf](http://www.green-trust.org/2000/biofuel/oilseed.pdf)

Small-scale Rural Oilseed Processing in Africa: [www.idrc.ca/en/ev-26984-201-1-DO\\_TOPIC.html#Potential](http://www.idrc.ca/en/ev-26984-201-1-DO_TOPIC.html#Potential)

Equipment For Decentralized Cold Pressing Of Oil Seeds:

[http://www.folkecenter.dk/plant-oil/efdcpos\\_ef.pdf](http://www.folkecenter.dk/plant-oil/efdcpos_ef.pdf)

### ***Equipment Manufacturers***

B100 Supply, LLC: [www.b100supply.com](http://www.b100supply.com)

Biodiesel Warehouse (A Vermont Company supplying the *BioPro* line of biodiesel processors): <http://www.biodieselwarehouse.com/xcart/home.php>

Cropland Biodiesel (distributing oilseed presses from China):

[www.croplandbiodiesel.com](http://www.croplandbiodiesel.com)

Kern Kraft (German) Oilseed Presses and filters: Circle Energy, M. Jon Becker-Schickel, Thermopolis, WY. 307-867-2233

Plastic-Mart.com (all sizes and styles of tanks): [www.plastic-mart.com](http://www.plastic-mart.com)



Utah Biodiesel Supply: <http://www.utahbiodieselsupply.com>

Walder Manufacturing (configuring and distributing oilseed presses from China):  
<http://www.waldermfg.com>

Rosedowns Presses: [www.rosedowns.co.uk/products/Mini\\_Press.htm](http://www.rosedowns.co.uk/products/Mini_Press.htm)

### ***Agricultural equipment on-line***

Several on line dealers for locating combines, combine heads, tine weeders, etc:

<http://www.tractorhouse.com>

<http://www.machinefinder.com>

<http://www.fastline.com>

<http://www.ironsearch.com>

<http://www.seedburo.com> (Clipper grain cleaners, Dickey John moisture tester)

### ***Further Reading***

**Cox, Jeff. 1979. *The Sunflower Seed Huller and Oil Press*. Rodale Press.** - In 2,500 square feet, a family of four can grow each year enough sunflower seed to produce three gallons of homemade vegetable oil suitable for salads or cooking and 20 pounds of nutritious, dehulled seed. [http://journeytoforever.org/biofuel\\_library/oilpress.html](http://journeytoforever.org/biofuel_library/oilpress.html)

**Head, S.W. et al. 1994. *Small Scale Vegetable Oil Extraction*. Natural Resources Institute.** - Covers a basic understanding of the science and composition of oils and economic and marketing considerations, principles of oil extraction, and basic oilseed processing methods. Includes many drawings that are helpful in understanding each process, with a *14-page appendix listing suppliers of small-scale equipment*. From ITDG: [www.developmentbookshop.com/detail.aspx?ID=971](http://www.developmentbookshop.com/detail.aspx?ID=971)

**Jenner, Mark. April 2006. *The BioTown, USA Sourcebook of Biomass Energy*. Indiana State Department of Agriculture and Reynolds, Indiana. [www.in.gov/biotownusa](http://www.in.gov/biotownusa).** - The BioTown, USA concept is an effort to convert Reynolds, Indiana—a small town (population 533) in the middle of the state—from a reliance on fossil fuels to biomass-based fuels for energy.

**Kemp, William H. 2006. *Biodiesel, Basics and Beyond: A Comprehensive Guide to Production and Use for the Home and Farm*. Aztext Press.** - *Biodiesel Basics and*



*Beyond* aims to separate fact from fiction and to educate potential home, farm and cooperative manufacturers on the economic production of quality biodiesel from both waste and virgin oil feedstock. An excellent “how-to” resource.

**Pahl, Greg. 2005.** *Biodiesel: Growing a New Energy Economy.* **White River Junction, VT: Chelsea Green Publishing Company.** - Vermont’s own, Greg Pahl, provides a history of biodiesel, and puts the current national, regional and global biodiesel industry in perspective while he explores the possibilities of a range of oilseed crops and technologies.

**Potts, Kathryn H. and Keith Machell. 1995.** *The Manual Screw Press: For Small-Scale Oil Extraction.* **ITDG Publications.** - Manual oil extraction from peanuts or other soft oilseeds can be a viable enterprise for small businesses. Describes small-scale processes of oil extraction for use in rural areas. From IT Publishing: [www.developmentbookshop.com/book.phtml?isbn=1853391980](http://www.developmentbookshop.com/book.phtml?isbn=1853391980)

**University of New Hampshire Biodiesel Group. 2005.** *Biodiesel Handout for New Hampshire Science Teacher’s Association Workshop .* - This is an excellent overview of the chemistry and process of converting vegetable oil to fuel. Very useful in understanding how transesterification works, to more readily solve problems when they occur. <http://www.unh.edu/p2/biodiesel>

**U.S. Department of Energy, National Renewable Energy Laboratory (NREL). 2008.** *Biodiesel Handling and Use Guide.* – The definitive technical guide to using and blending biodiesel with petrodiesel, with good information for cold weather use. [http://www.nrel.gov/vehiclesandfuels/nrbf/pubs\\_biodiesel.html](http://www.nrel.gov/vehiclesandfuels/nrbf/pubs_biodiesel.html)

### ***Insurance Providers for Small-scale Biodiesel Production***

▶ Nautilus Insurance Group (<http://www.nautilusinsgroup.com>) is a national underwriter with favorable rates and Vermont agents. Market Place Insurance, located in Essex Junction, is a good place to start.

▶ Nationwide Agribusiness appears to be one of the largest underwriters of biodiesel business and the least expensive, mostly due to their experience in the market. Contact Glenn Baker (agent) at (712) 737-3800. The Nationwide web site is [www.nationwideagribusiness.com](http://www.nationwideagribusiness.com).

▶ Kramer-Warner Associates, Inc. of Pennsylvania is also recommended. Contact Ron Ratigan (agent) at (610) 359-1422.

▶ IMA of Kansas, Inc., is another underwriter with considerable experience in the biodiesel business. (316) 266-6203.



## Biodiesel Feasibility Studies

### **From Vermont**

Feasibility Analysis: *Mobile Unit for Processing Oilseed Crops and Producing Biodiesel in Vermont*. December 2008. Callahan, Chris. Callahan Engineering, PLLC  
<http://www.vsjf.org/biofuels/resources.Biodiesel.shtml>

Feasibility Analysis: *Solar Seed Dryer and Storage Bin at State Line Farm, Bennington, VT*. October 2008. Callahan, Chris. Callahan Engineering, PLLC  
<http://www.vsjf.org/biofuels/resources.Biodiesel.shtml>

Homegrown Feed, Food and Fuel. February 2008. *The Market Potential of Farm-Scale Oilseed Crop Products in Vermont*. Stebbins, Emily J., for Vermont Sustainable Jobs Fund. <http://www.vsjf.org/biofuels/resources.Biodiesel.shtml>

University of Vermont Extension; Grubinger, Vern; Darby, Heather; et al. This vast resource of reports and case studies is compiled and updated by Vern Grubinger.  
<http://www.uvm.edu/vtvegandberry/energylinks.html>

### **Outside Vermont:**

AIM-AG: Agri-Industry Modeling & Analysis Group. 2003. *Economic Feasibility of Producing Biodiesel in Tennessee*. <http://beag.ag.utk.edu/pp/biodiesel.pdf>.

BBI Biofuels Canada. February 2006. *Feasibility Study for a Biodiesel Refining Facility in the Regional Municipality of Durham*.  
[www.region.durham.on.ca/departments/edo/business/biodieselfeasibility.pdf](http://www.region.durham.on.ca/departments/edo/business/biodieselfeasibility.pdf)

Fortenbery, T. Randall. March 2005. *Biodiesel Feasibility Study: An Evaluation of Biodiesel Feasibility in Wisconsin*. <http://aae.wisc.edu/pubs/sps/pdf/stpap481.pdf>

Mississippi Development Authority. 2003 *Mississippi Biodiesel Feasibility Study*.  
[www.mississippi.org/content.aspx?url=/page/2756](http://www.mississippi.org/content.aspx?url=/page/2756)

New York State Energy Research and Development Authority. *Statewide Feasibility Study for a Potential New York State Biodiesel Industry*. Final Report 04-02. June 2003.  
[www.nyserda.org/publications/biodieselreport.pdf](http://www.nyserda.org/publications/biodieselreport.pdf)

Shumaker, George A., et al. 2000. *A Study on the Feasibility of Biodiesel Production in Georgia*. <http://www.agecon.uga.edu/~caed/biodieselrpt.pdf>