



**America's Most Experienced  
Biodiesel Company**

**[www.biodiesel.com](http://www.biodiesel.com)**

*Think globally, act locally!*



2011

Green Jobs  
**AWARD**

WINNER

**Pacific Biodiesel – Maui, Hawaii USA, 1996**



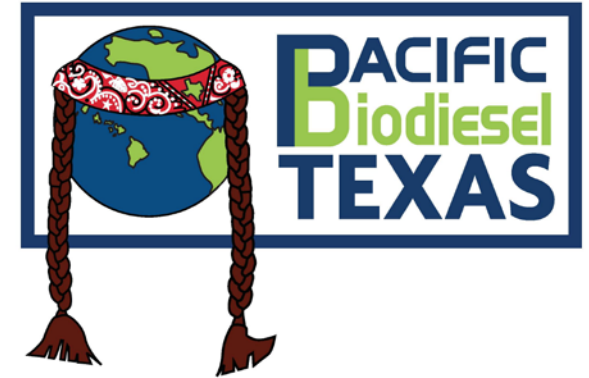
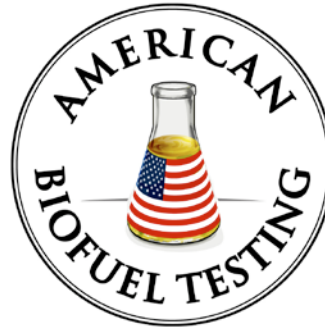
## MISSION STATEMENT

To promote a clean, sustainable energy future through the community-based production of renewable fuels

# The Sustainable Biofuel Model

- Source feedstock locally
  - Sequester all waste oil and grease
  - Support local agriculture (Food and Fuel)
- Expand processing capacity with increase in local oil supply
- Develop co-products and high value sidestreams
- Develop local training for industry jobs
- Distribute all fuel locally to displace imported petroleum

# The Pacific Biodiesel Ohana





# Pacific Biodiesel Technologies

## ■ Process Technology

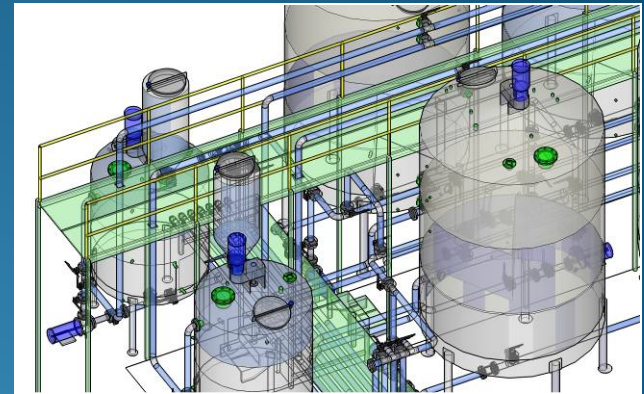
- Multi-feedstock biodiesel process technology
- Process utilities and tank farm equipment
- Feedstock collection and rendering equipment
- Facility retrofits

## ■ Laboratory Services

- ASTM fuel testing
- QC Program development
- Process verification and optimization

## ■ Research and Development

- Contract R&D projects
- Feedstock development
- Pilot Plant verification



# Professional Test Lab Facilities

## Fuel Testing/Research & Development





# TECHNOLOGY INSTALLATION



## 12 Biodiesel plants completed



**Maui 1996**



**Japan 1998**



**Oahu 2002**



**Virginia 2004**



**Nevada 2005**



**Oregon 2005**



# Pacific Biodiesel process plants (cont.)



Maryland 2006



Texas 2006

California 2006



Oregon II 2008





## • SCOPE

- New 5.5 million gallons per year Biodiesel manufacturing plant
- New processing technology
- Multi-feedstock capability
- Projected start date Spring 2012











# FEEDSTOCK:



## Experienced trucking companies



*Cleanway*  
Grease Trap and Used Cooking Oil Recycling

ENCORE  
OILS



2009 PARTICIPANT

RESTAURANTS  
FOR  
RENEWABLES™ 

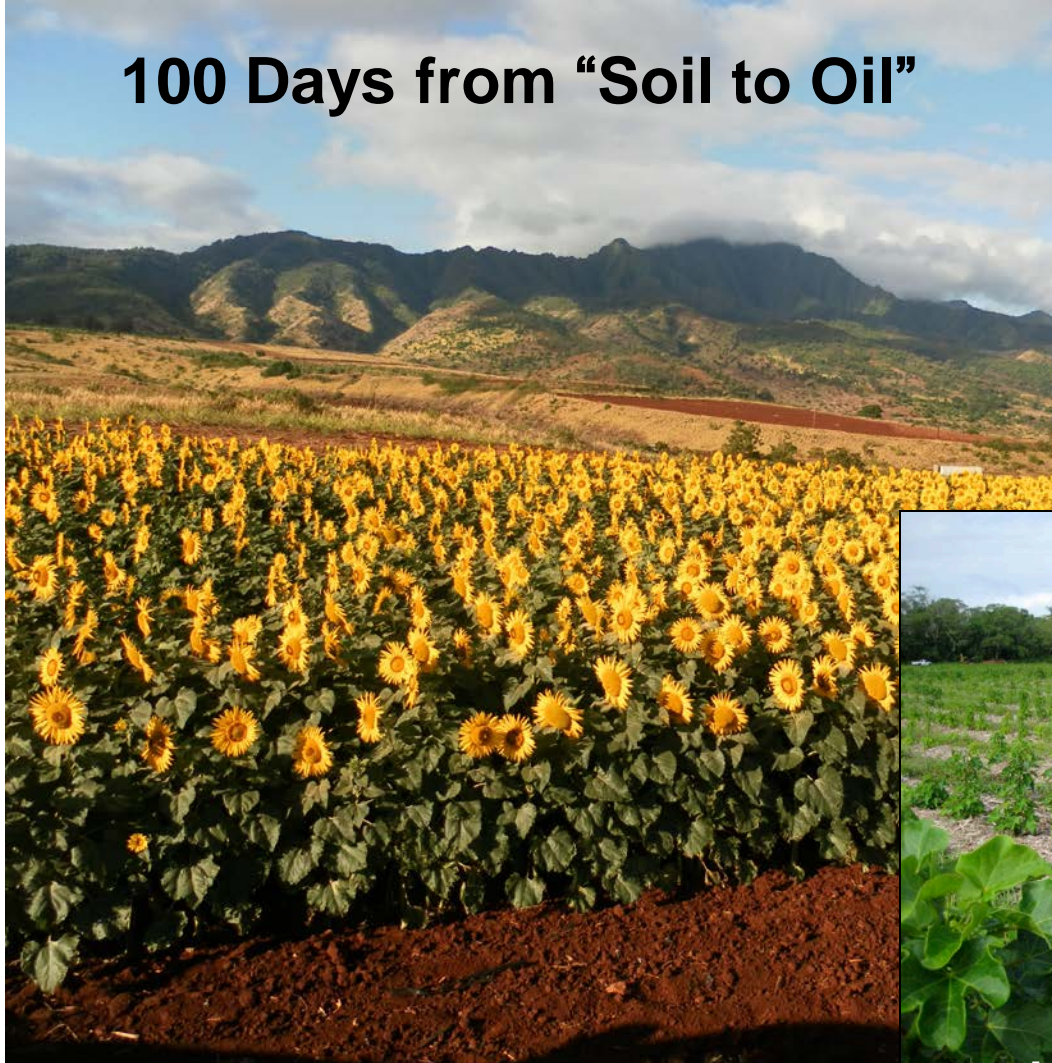
*Food, then Fuel!*

Our cooking oil is locally recycled  
into renewable fuel to benefit  
our community & the planet.



# Biofuel Crop Demo Project – Oahu\*

100 Days from “Soil to Oil”



Jatropha farm, Big Island

*\*included in APEC brochure*



# Hawaii's Biomass Potential

## Estimated Available Acreage for Biomass Production (Acres)

	<b>Maui</b>	<b>Kauai</b>	<b>Oahu</b>	<b>Hawaii</b>	<b>Total</b>
Stillwater/Kinoshita estimates	26,000	7,000	25,500	27,000	85,500
Land currently used for sugar production	36,700	11,100	0	0	47,800
<b>Sub-total</b>	<b>62,700</b>	<b>18,100</b>	<b>25,500</b>	<b>27,000</b>	<b>133,300</b>
Additional available prime farmland	0	35,500	15,300	30,000	80,800
<b>Sub-total</b>	<b>62,700</b>	<b>53,600</b>	<b>40,800</b>	<b>57,000</b>	<b>214,200</b>
Existing non-sugar agricultural production	9,300	3,000	17,300	11,800	41,400
<b>Max potential (exclusive of non-sugar ag land)</b>	<b>53,400</b>	<b>50,600</b>	<b>23,500</b>	<b>45,200</b>	<b>172,800</b>

# Table 17.16-- LIQUID FUEL TAX BASE, BY COUNTY: 2007

[In thousands of gallons. Liquid fuel sold in a given month is usually reported the following month.

Annual totals accordingly refer to fuel sold during a 12-month period ending November 30]

Type of fuel	State total	City and Co. of Honolulu	County of Maui	County of Hawaii	County of Kauai
Total	1,018,233	623,765	152,301	153,875	88,292
Gasoline	480,632	299,311	62,629	82,118	36,575
<b>Diesel oil, non-hwy.</b>	<b>215,503</b>	<b>163,333</b>	<b>12,560</b>	<b>15,665</b>	<b>23,944</b>
<b>Diesel oil, hwy. use</b>	<b>66,030</b>	<b>39,091</b>	<b>9,019</b>	<b>13,079</b>	<b>4,841</b>
Liq. pet. gas, off hwy.	2,106	2,106	-	-	-
Liq. pet. gas, hwy. use	108	88	7	7	5
Small boats, gasoline	262	186	-	62	13
Small boats, diesel oil	626	17	61	373	175
Aviation fuel	235,653	118,017	67,643	32,722	17,270
Other fuel	17,314	1,616	382	9,848	5,468

Source: Hawaii State Department of Taxation, Tax Research & Planning, "Liquid Fuel Tax Base & Tax Collections" (annual release); <[http://www.hawaii.gov/tax/a5\\_3txcolrptarchive.htm](http://www.hawaii.gov/tax/a5_3txcolrptarchive.htm)> accessed March 31, 2008.

# Land required to meet HCEI Goal for on-road diesel fuel

- 66 million total gallons
- 40% renewable fuel / 30% efficiency
- 26 million gallons of renewable diesel
- 86,000 acres needed
- 300,000 tons of presscake generated



# Big Island Biodiesel

- 5million gallons oil
- 50,000 tons meal
- 170 tons/day
- 17,000 acres

# Processing Equipment



- Planting
- Harvesting
- Crushing













# Feed Value of Presscake Protein

- Soybean Meal 46.4%
- Coconut Meal 7.3%
- Kukui Meal 7.5%
- Jatropha Meal 19.9%
- Sunflower Meal 25.1%
- Safflower Meal 23.9%

# Biodiesel By-products

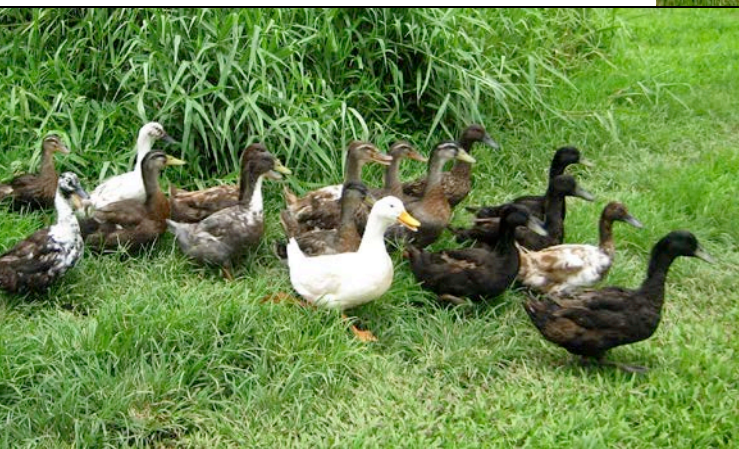
## By-product Uses

- Animal feed
- Soap and Oleochemical
- Fertilizer
- Energy





# `Aina Mo' Project - Maui





# **A SUSTAINABLE FUEL FUTURE**

A wide-angle photograph of a vast sunflower field. The sunflowers are in various stages of growth, with some showing bright yellow heads. The field stretches to the horizon under a clear blue sky. In the distance, a range of mountains is visible against the horizon line.

**Sustainable source – Energy Security**  
**Environmental impact – Healthy future**  
**Diversified Ag – Crops not Condos**  
**Community-based – Local Business**

**All Sustainability is Local**