

The image features a horizontal banner with a photograph of a farm scene. In the foreground, a large white dome-shaped structure is partially visible. The background shows a lush green forest, a large red barn with a grey roof, and snow-capped mountains in the distance under a clear blue sky. The text 'FULL CIRCLE FARM' is written in a large, stylized, maroon serif font across the center of the banner. Below it, the words 'CERTIFIED ORGANIC' are written in a smaller, black, sans-serif font.

FULL CIRCLE FARM  
CERTIFIED ORGANIC

FCF Biodiesel Project  
Carnation, WA

# Farm to Fryer to Farm

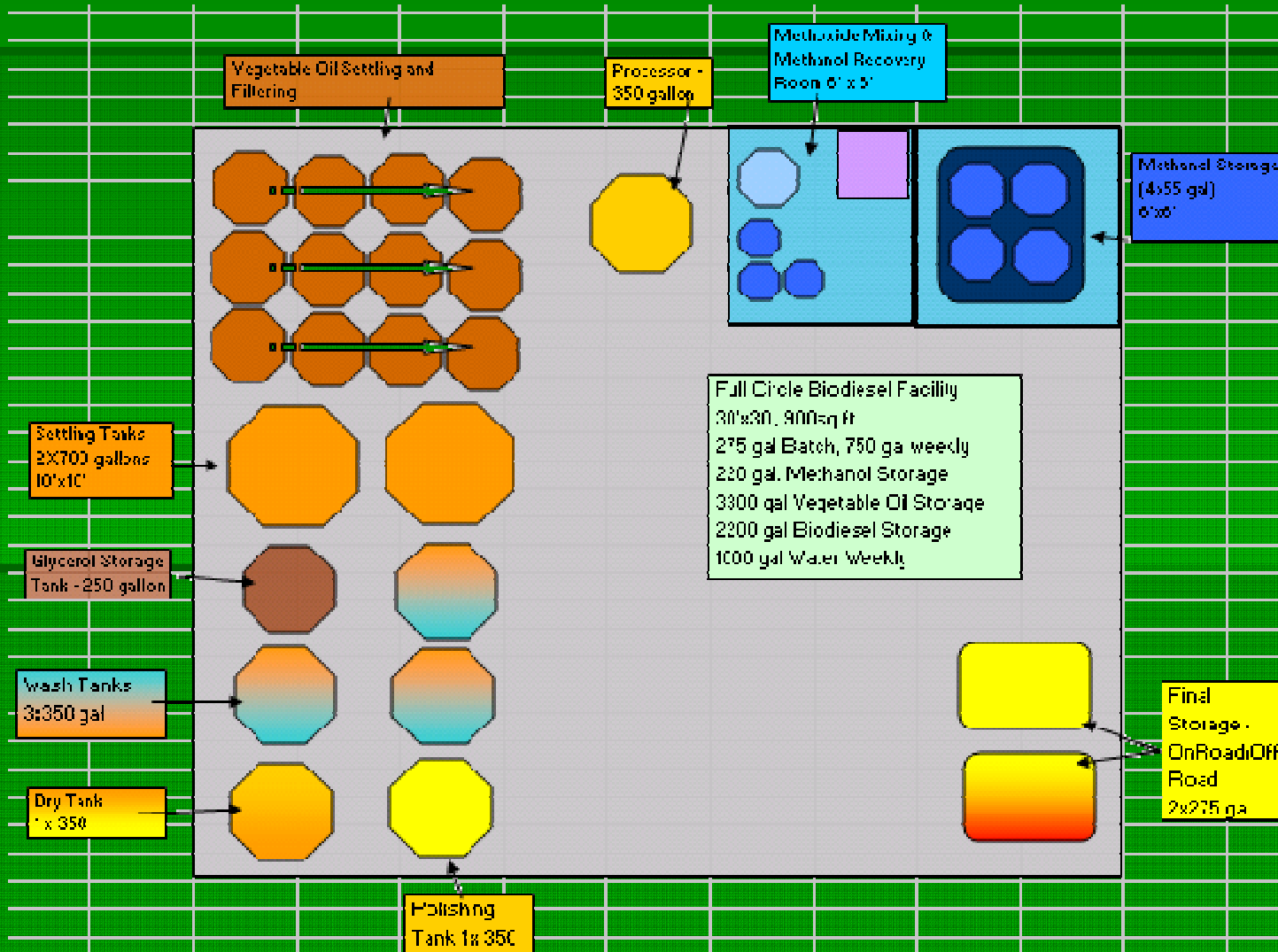
- Full Circle Farm is a 250 acre organic vegetable farm in the Snoqualmie Valley, serving the greater Seattle area.



# Project Details

- 30,000 gallon Annual Fuel Production
- Oil Collection from existing Restaurant accounts
- Fuel used on-farm, in delivery vehicles, possible bio-heat and off-road sales
- Facility operated by one full time employee, with part time assistant.
- Currently producing small batches during the design and building stage.

# Plant Layout



# Steps to Production

- Permit Requirements
- Design issues
  - Methanol Recovery
- Obtaining Materials
- Building Oil Supplier Relationships

# Permit Requirements

- Contacted Dept. of Ecology, Office of Regulatory Assistance, Puget Sound Clean Air Agency, King County Fire Marshall.
- Exempt from Waste Haulers Permit
- Primary Permit needs relate to Methanol Emissions

# Production & Labor Estimates

## What was my price per gallon? *(Excluding electricity, equipment)*

		Cost	This Batch
Methanol	Your price per gallon	\$ 2.50	\$ 375.00
KOH	Your price per pound	\$ 0.90	\$ 53.87
oil		\$ 0.38	\$ 288.54
<b>Labor</b>	See box at right	<b>\$800.00</b>	<b>\$ 800.00</b>
Misc Equipment	filters and misc.	\$ 25.00	\$ 25.00
Fuel for Collection	See box at right(for fuel at \$2.69)		-
		<b>Total \$</b>	<b>1,542.41</b>

Labor Hours		
	Process Tech	Driver/Assistant
Labor Rate	\$15.00	\$10.00
Hours worked	40	20
Wage	\$600.00	\$200.00
Wage Total	\$800.00	

Fuel Consumption	
Miles Driven	425
MPG	12
Gallons Used	35.41666667

		Quantity	Gallons or liters (from oil # above)
Useable fuel	the amount of biodiesel you produced	700	Gallons
	your yield, as a percentage of oil collected, was ...	93%	

**Your cost per gallon \$ 2.20**