



**For further information  
on this report, contact:**

**James DePelisi**

*President/Founder*

LDV Capital Management

(954) 746-3117

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

10640 North West 32nd Street  
Sunrise, Florida 33351

Tel: (954) 746-3117

Fax: (954) 572-7988

# **White Paper Study**

## **Bio-Diesel Brown Oil**

**“A Recyclable That Could Fuel The World”**

by James Depelisi, President/Founder

LDV Capital Management

*October 2008*



## INTRODUCTION

A pace setting form of Bio-diesel that comprises a fragmented industry is a recyclable product known as “Brown Oil”. Brown Oil is derived from sludge removed from underground grease traps. The compound found in underground grease traps comes from water, used cooking oil, vegetable oil, animal fat, and fatty acid wastes that travel down the drain in a restaurant or food manufacturing factory.

LDV Capital Management feels that the “grease trap” market is an untouched industry for alternative fuel. Today, there are very few companies and no commercial infrastructure built to produce bio-diesel from grease trap, brown oil. Currently there are no large manufacturing, commercialized companies consolidating the sector for production. LDV Capital Management has written this White Paper to shed insight of the opportunity that companies have to commercialize and consolidate this segment of the alternative fuel market.

### **Bio-diesel:**

Bio-diesel is an oxygenated fuel that is produced by transesterifying triglycerides with alcohol in the presence of a base or acid catalyst. Any source of complex fatty acid can be used to create bio-diesel and glycerin.

Bio-diesel is a clean-burning fuel that provides numerous emissions benefits as compared to diesel, including: very low sulfur content; significantly lower exhaust particulates and hydrocarbons; significantly lower lifecycle greenhouse gas emissions; and non-toxicity.

Bio-diesel has high viscosity, lubricity and virtually no sulfur content. It is often used as an additive to Ultra-Low Sulfur Diesel (ULSD) fuel.

Bio-diesel can be found in four different forms in the market:

B2 - (Two% Bio-diesel + 95 - 98% Number 2 Diesel fuel): Used as an additive

B5 - (Five% Bio-diesel + 95 - 98% Number 2 Diesel fuel): Used as an additive

B20 - (20% Bio-diesel + 80% Number 2 Diesel fuel): Used as a blend component

B100 - (100% Bio-diesel): Used as a pure – neat fuel.

### **The World Today:**

Three factors make the demand for “Brown Oil” Bio-diesel to be both productive and efficient:

1. Geopolitical - The United States currently imports approximately 60% of its oil needs. Political unrest and attacks on oil infrastructure in the major oil-producing nations, particularly in the Middle East, have added a “risk premium” to world oil prices. Developing nations such as China and India have substantially increased their demand for oil. As a result, world oil prices exceeded \$95 per barrel during December 2007. In the summer of 2008, oil prices hit an inflation-adjusted all-time high of more than \$120 per barrel.

2. Green House Gas Emissions – In the United States, greenhouse gas emissions come primarily from the combustion of fossil fuels in energy use. This includes carbon dioxide emissions from the combustion of petroleum, coal, and natural gas. In 2006, this represented 82 percent of total U.S. anthropogenic greenhouse gas emissions. In contrast, bio-diesel decreases carbon dioxide and methane emissions. Petroleum diesel produces 2.59 kilograms of carbon dioxide for every liter burned, compared to 0.26 kilograms of CO<sub>2</sub> per liter of vegetable-based bio-diesel.

3. Saving the Planet – The “Think Green” mindset of recycling is not a fad. It is a reality that is here to stay. Becoming



more sustainable to prevent depleting and exploiting the Earth's natural resources, is something that makes sense to everybody. Moreover, recycling in the next 10 years will save not only our planet, but also the economy. On the business front, recycling is a natural process of manufacturing. Manufacturing is one of the leading facets that drives and stimulates economies of scale. Being sustainable and more efficient is actually a good business strategy.

As a domestic, renewable source of energy, "Brown Oil" Bio-diesel, from underground grease traps, can efficiently and productively reduce American dependence on foreign oil. Transport fuel demand is estimated to grow by over 55% by 2030. Governments are increasingly setting higher targets for the use of bio-fuels and the reduction of greenhouse gas emissions. We believe that bio-fuels could represent up to 25% of the fuel pool by 2030 versus 2% today.

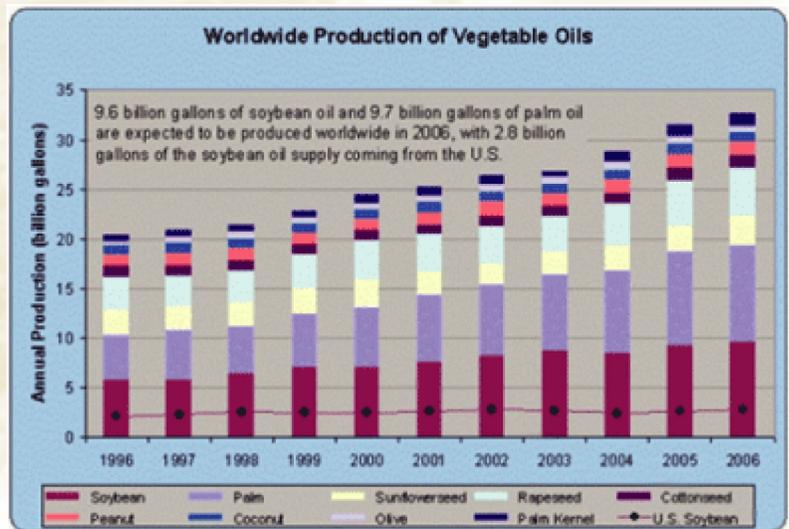
***This White Paper will provide pros and cons of why "Brown Oil" is the best substance to create bio-diesel to address all energy problems in the world today.***

## Alternative Fuel Sources:

Most of the primary alternative fuel sources, to date, **have not put an emphasis on recycling**. They are bio-energy crops that somewhat "Rob Peter to Pay Paul", due to the potential ill effects that they have on the economy and other aspects of the environment.

They include but are not limited to:

- I. Bio-diesel created from:
    - A. Rapeseed Oil
    - B. Soybean Oil
    - C. Algae Oil
    - D. Palm Tree Oil
    - E. Mustard Oil
    - F. Jatropha Oil
    - G. Peanut Oil
    - H. Hemp Oil
  - I. Sunflower Oil
  - J. Canola Oil
  - K. Cottonseed Oil
  - L. Corn Oil
- II. Ethanol created from:
    - A. Corn
    - B. Sweet Beets
    - C. Switch Grass
    - D. Sugar Cane



Source: USDA's Economic Research Service

Although the fuel created from these sources is safer for the environment, with fewer Green House Gas (GHG) efficiency emissions, the above described sources are not recyclable. Thus, they are very costly to produce, putting a strain on other elements of the economy and also the environment.

Bio-energy crops take up valuable land that could be used for growing needed food supplies. World grain yields have fallen for six of the past seven years, bringing reserves to the lowest they have been in thirty years. The pressure on land from food and bio-energy crops is speeding up deforestation and species extinction worldwide. Critical ecological areas in South America, including the Brazilian rain forest, are experiencing significant environmental disturbances.

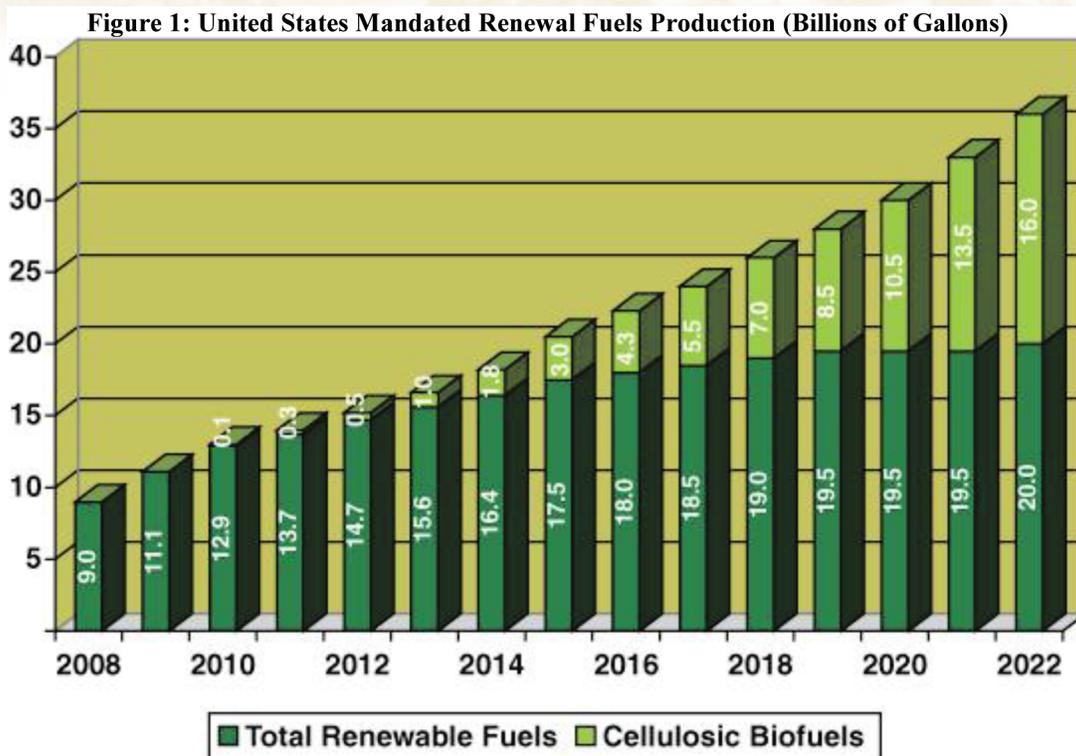


Alternative fuel sources that have applied an experimentation strategy toward recycling include:

- I. Bio-diesel created from:
  - A. Tire rubbish
  - B. “Yellow Oil” Fryolator Grease
- II. Cellulosic Ethanol created from:
  - A. Grass and Tree Clippings
  - B. Rice Straw
  - C. Wood Chips and Mulch

Cellulosic Ethanol also involves a form of recycling, however, the production plants to convert and extract the ethanol involves expensive production plant processing and most experiments are still in their infancy and pilot stages.

However, the “Yellow Oil” fryolator grease is becoming a demanding commodity that now trades on the Chicago Board of Exchange, and it is being stolen by mom and pop thieves from the back of restaurants. Traditionally, a hauler charged restaurants to remove and cart the “Yellow Oil” away; but with new home based bio-diesel “stills” springing up, people are now stealing the product. Supply and demand economics will continue to drive higher the price of a bio-diesel product created from “Yellow Oil”.



Source: Renewable Fuels Association; [www.ethanolRFA.org](http://www.ethanolRFA.org)



## **Brown Gold:**

As of the date of this paper, it is the opinion of LDV Capital Management that the **most abundant, most cost effective, efficiently produced bio-diesel product, benefiting the environment, from an emissions perspective, land preservation perspective, and recycling perspective, is the “Brown Oil” bio-diesel extracted from underground grease traps.** It provides a greenhouse gas emissions reduction of up to 79%.

### *Here is why:*

First, by law, grease sludge associated with grease traps has to be removed from the ground. If it is not, the grease waste can seep lower under the ground, and clog up sewer pipes where raw sewerage could potentially infest and negatively effect communities. Through state mandates, many municipalities and counties around the country, require the grease to be removed at least twice per month.

Secondly, if the grease trap grease is not removed, the sludge could seep lower into the community aquifer, contaminating drinking water for the community.

Thirdly, the grease trap, bio-diesel resource, is never going to be affected by inclement weather conditions, the way the prominent agricultural nurseries of algae, palm tree, rapeseed, and soybean can; or the way corn crops, sugar cane crops, or sweet beet crops are with ethanol. The production of “Brown Oil” will not impact food prices or food costs.

Fourthly, the grease trap product will never be stolen, because:

1. It involves a professional process to remove the grease sludge, where a grease trap, “man – hole” cover (similar in appearance to a sewer cover) has to be removed. The sludge is then vacuumed siphoned from the ground into a septic tank modulated vehicle.

2. The product will also never be stolen because the average person does not want to deal with the foulness of the product.

Finally, with an unlimited supply of grease trap sludge, along with filtration and refinery processing being very cost effective, the bio-diesel product can be produced for just a little over \$1.00 per gallon.

***The recycled grease sludge product can also be used for other ancillary revenue sources, such as cosmetics, fertilizer, home products, and industrial products.***

## **Logistics:**

In accordance with Florida statutes, the grease sludge from ground laden grease trap’s, is considered a solid waste. Hence, municipality franchise agreements can be implemented with cities and counties, similar to current sanitation franchise agreements.

In the sanitation industry, most municipalities have franchise agreements with Waste Management, Republic Services, Allied Waste, or subsidiary companies associated with these large conglomerates. Normally, 10 year agreements are put in place where municipalities receive legalized franchise fees of reimbursement. In turn, the garbage companies are able to conduct business exclusively in that particular city without any competition.

Municipal governments should explore this model, because other than getting franchise fees, they can also be purchasers of the bio-diesel fuel for their city vehicles which is a positive public relations campaign for them. It is also a tremendous savings of tax payer dollars in comparison to the municipality using diesel or gasoline fuel.

This strategy is a win-win situation for the grease trap haulers. The sector is comprised of 200 companies in South Florida, but is the epitome of a fragmented, mom and pop industry. There aren’t any industry associations either regionally or



nationally. Technology is outdated, bookkeeping is mundane, transportation logistics are archaic, corporate appearance is lacking, and unsophisticated methods of waste removal and disposal are inherent. Yet, it is a recurring revenue industry based upon need versus want economics. This makes the perfect formula for a roll up strategy of the industry.

## **Bio-diesel General Benefits:**

- There is no need for further modifications for its use in conventional Diesel engines.
- Its performance in Diesel engines is comparable to that of No: 2 Diesel fuel.
- It may be blended with No: 2 Diesel fuel in any proportion.
- It has high lubricity and minimizes the wearing of the engine.
- It produces much less toxic exhaust emissions than Diesel oil.
- It requires no change in fuel dispensing infrastructure.
- It does not substantially affect fuel consumption or torque.
- It greatly reduces visible smoke during ignition.
- It is rapidly biodegradable (comparable to dextrose).
- It is approximately 10 times less toxic than ordinary table salt (NaCl).
- Its transport and storage is safe given its very high flash point.
- It contains no sulfur, allowing the use of exhaust emission catalysts.

## **Summary:**

In summary, everything adds up positively to create bio-diesel from “Brown Oil” grease trap sludge:

1. Removal of Grease Trap grease from the ground is an environmentally necessary procedure.

2. As a recyclable product, “Brown Oil” is an end less supply source to create bio-diesel without having to agriculturally grow or cultivate the staple raw material.
3. Brown Grease produces an environmentally friendly fuel product.
4. Bio-diesel is a cost effective source of fuel, not affected by expensive production, bad weather patterns, or thievery.
5. Bio-diesel provides extreme benefits to municipalities with franchise fees, cheaper fuel prices, and positive public relations.
6. Roll-up opportunities exist in the industry due to the logistical benefits to the non-professionalized grease trap industry, saving greaser trap haulers on disposal fees, allowing them to operate free of competition, and providing them revenue sharing on bio-diesel fuel.
7. Bio-diesel, in general, is environmentally friendly and engine friendly.

One of the other major advantages of bio-diesel is the fact that for every unit of fossil fuel it takes to make bio-diesel results in 3.2 units of energy gain, and every gallon of bio-diesel used has the potential to extend our petroleum reserves by four gallons. According to the National Bio-diesel Board, when bio-diesel is blended at a ratio of just 20% with petroleum diesel (B20), harmful emissions and particulates are reduced by as much as 20%, while carbon monoxide, a prime contributor to global warming, is reduced by 12%. Current demand potential is estimated at 1.7 billion gallons per year which, if met, would account for 5.5% of U.S. vehicle/on-highway consumption.

**DISCLAIMER:** LDV Capital Management is a Registered Investment Advisory firm licensed with the State of Florida. The information stated herein is for educational purposes only and is not to be used or reproduced without the expressed written consent of the author. Moreover, any content herein is not to be deemed as specific strategies that could be taken out of context and used for any manipulative practices in taking a company public or manipulating any publicly traded issue. This report was written as a feasibility opinion of how a company could persevere in the stock market, with only compliant and forthcoming intentions to investors and shareholders. It is simply information compiled from objective analyses in the market. Information is believed to be reliable, but makes no representation to its accuracy or completeness. LDV does not recommend, warrant, or guarantee the success of any action taken in reliance on statements made in this report. LDV does not endorse, advocate or suggest using information in this report that could be used for any non compliant, scandalous, or artificial inflation of a company’s stock.