

**An Agricultural Solution
To the
Imported Petroleum and Pollution Crises©
March 31, 2004**

PREMISE: There is an effective and achievable solution requiring no research that can simultaneously eliminate wastewater pollution, the energy crises and the national security threat from Radical Islam all the while creating jobs from a highly evolved, in-place-now and under utilized American knowledge, labor and resource base.

THE SOLUTION: Close political ranks in the United States and Canada and with the Agricultural lobbies, take all steps necessary steps to reduce or eliminate the purchase of imported natural gas and petroleum within the next few growing seasons by growing inedible oils, algae and grains that can be processed to replace imported petroleum.

Instead of investing billions of dollars in wastewater pollution prevention and remediation, invest in the distribution system necessary to transport wastewater from existing treatment plants to deserts and brownfields in order to grow bio-based petroleum alternatives in North America, thus marginalizing the grip of OPEC by driving down the price of petroleum and contributing to the security of North Americans in the shortest time with the minimum investment.

Henry Ford had this same vision and invested heavily in soybean research and before his death manufactured a 1942 Ford concept car with most of its components made from materials produced by American farmers.

ASSUMPTIONS:

- Most petroleum-based chemicals, fuels, lubricants, plastics, pharmaceuticals, chemicals and other products can be replaced by inedible oils, grains and biomass grown on American lands by experienced American and Mexican farmers without significant changes in the refining, processing and distribution systems now in place, all within the borders of the United States.
- Pollution from human and animal-produced wastewater will require an investment of tens of billions of dollars in the next ten years. The USEPA states that one trillion dollars were invested by American communities in the last 20 years to protect our water resources. It is now estimated that the same trillion dollars will need to be invested in the next ten years!
- The water and nutrients in human American wastewater alone can, without additional treatment sustain more than 12 million acres of corn or 64 million acres of soybeans or rape seed per year. This number can be doubled or tripled by adding poultry and other animal wastes to the equation.

- The nitrogen-rich gases from American power plants can be used to grow millions of gallons of oil derived from the single-cell plant called algae instead of polluting the air costing billions of dollars in American productivity losses and health-related costs. These algae-oil facilities can be placed directly on the power plant facilities eliminating the need for transportation costs of fuel for the power plants.
- American farmers are in need of new crops to replace tobacco and other crops that compete with foreign imports and many are still paid to NOT grow crops at all! Growing petroleum alternatives creates more jobs in areas where employment is needed without threatening the existing farming community.
- Some percentage of revenues from the purchase of Islamic states petroleum by the United States is funding anti-American education and supporting the Islamic terrorist's war on Freedom and the American way of life.
- The wastewater from all the wastewater treatment plants and animal feedlots can be piped to arid farm lands, deserts and polluted brownfields to grow soybeans and corn in regions that need both the required water and nutrients.
- It takes 40 pounds of nitrogen fertilizer to grow an acre of legumes such as soybeans versus more than 200 pounds for corn because like most legumes, soybeans can fix nitrogen from the air and corn cannot. Therefore, oil-producing soybeans and the Pongam Bush (*Pongamia Pinnata*) are the preferred crop to use the nitrogen content of wastewater. However, the greatest oil production per acre is from the Oil Palm Tree which would thrive in the southwestern deserts with adequate water and nutrients.
- One of the obstacles to growing petroleum alternatives is the cost of fertilizer, which requires a natural gas and petroleum to produce. The other is the lack of fertile land not already in service to growing food. By using wastewater and unusable land, these obstacles can be overcome. According to John Sawyer, associate professor of agronomy at Iowa State University, the majority of nitrogen fertilizer sold in the Midwest is either anhydrous ammonia, or products made from anhydrous ammonia (urea, ammonium nitrate, and urea-ammonium nitrate solutions). Natural gas is a major component of ammonia production for both energy and supply of hydrogen (H) in ammonia (NH₃). Therefore, the ammonia production cost is closely tied to the price of natural gas. Natural gas supplies derived in the U.S. are nearly depleted; so much is imported from other countries, such as Algeria and the Middle East. Natural gas accounts for more than 85 percent of the total ammonia production cost. When the price of natural gas increased in the last two years, the cost of nitrogen fertilizer also increased dramatically.
- There are tens of millions of acres of unusable land in America that could be farmed to grow petroleum alternatives crops with the water and nutrients in wastewater.
- American vehicles including SUV's can use fuels (biodiesel and alcohol) derived from vegetable oils and grains with only minor changes. This means there would be no need to penalize Americans for driving the vehicles they choose to drive. This averts the gasoline crises and lowers air pollution.

- The existing infrastructure of the petroleum industry, be it refineries, distribution, or chemical factories can, with minor modifications, easily convert from petroleum to oils from soybeans and alcohols from grains

Authored by:

David Del Porto
Concord, Massachusetts USA

Date of authorship:

March 31, 2004

About the author:

<http://www.ecological-engineering.com/delporto.pdf>