

# HEMP FOR CLEAN, SUSTAINABLE FUEL

**Q. How are the answers to our environmental, farming and energy crises connected?**

*A. Farming environmentally sustainable biomass fuels can tap the energy of plant life to replace the burning of fossil fuels which lead to extinction.*

## ***We can be energy independent without nuclear power***

Biomass is the term to describe all biologically produced matter. World production of biomass is estimated at 146 billion metric tons per year, mostly as wild plant growth. Biomass conversion to fuel has proven economically feasible in laboratory tests and continuous operation of pilot plants since 1973. It has a heating value of 5000-8000 BTU/lb, with virtually no ash or sulfur produced by combustion.

There is one farm crop that can fill all our energy needs. Hemp is the only biomass resource capable of making America energy independent.

Both Thomas Jefferson and George Washington grew hemp. But, under pressure from the oil and timber industries, our government outlawed it in 1938.

About 6% of contiguous U.S. land area cultivated for biomass could supply all our current demand for oil and gas. This is the basis of the emerging concept of "energy farming," wherein farmers grow and harvest crops for biomass conversion to fuels.

## ***Hemp biomass technology can meet our energy needs.***

Pyrolysis is the technique of applying high heat to organic matter (lignocellulosic materials) in the absence of air or in reduced air to produce charcoal, condensable organic liquids (pyrolytic fuel oil), non-condensable gasses, acetic acid, acetone and methanol.

It can be adjusted to favor charcoal, methanol, pyrolytic oil or gasoline, at 95.5% fuel-to-feed efficiency. It uses the same technology now used to process crude fossil fuel oil and coal.

Pyrolytic fuel oil has similar properties to #2 and #6 fuel oil and can be transported economically by trucking, creating even more jobs for Americans. Pyrolysis

charcoal has nearly the same heating value in BTU as coal, with virtually no sulfur. Charcoal can be transported by rail to power plants generating electricity.

## ***Clean energy for America:***

When we use sulfur free charcoal instead of coal, the problems of acid rain will begin to disappear. And when the energy crop is growing it takes in CO<sub>2</sub> from the air, and releases oxygen, so when it is burned the CO<sub>2</sub> released creates a balanced system. Global greenhouse warming and adverse climactic change will automatically diminish.

## ***Farms—a natural resource:***

Farmers must be allowed to grow an energy crop that produces at least 10 tons per acre in 90-120 days, and grows in all climactic zones in America. Hemp is drought resistant, making it an ideal crop in the dry western regions of the country.

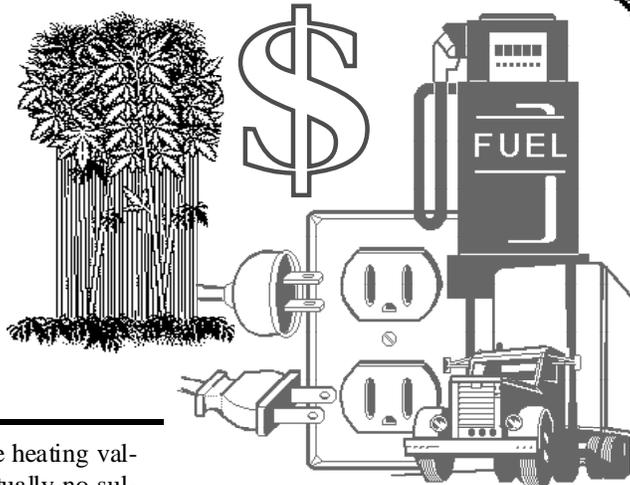
Hemp is the number one biomass producer on earth: 10 tons per acre in approximately four months.

Hemp is self-fertilizing, pest resistant and can be grown in rotation with food crops or on marginal land, where food production is not profitable. This energy crop can be harvested with equipment readily available. It can be "cubed" by modified hay cubing equipment, and the cubes are ready for conversion with no further treatment.

## ***Real National Security:***

By the year 2000, America will have exhausted 80% of her petroleum reserves. Will we go to war with the Arabs for the privilege of driving our cars? Will we stripmine our land for coal, and poison our air so we can drive our autos an extra 100 years? Will we raze our forests to make fuel?

Or will reason prevail? The main argument against using hemp does not hold up



to scrutiny: Hemp grown for biomass will not make you high if you smoke it. The 20 to 40 million Americans who smoke pot would loath to smoke such hemp, so the crop is worthless as an intoxicant. In the former Soviet Union, where farmers are free to grow hemp, they tell of students who sneak into the fields to steal some hemp branches. "But they never come back for more."

Only certain strains of hemp, grown under special conditions can produce 'marijuana.' There is virtually THC-free hemp to be grown, but even that is blocked.

During World War II, our supply of hemp for industrial feedstock was cut off by the Japanese. The federal government solved that emergency by suspending marijuana prohibition. Patriotic American farmers were encouraged to apply for licenses to cultivate hemp, and responded enthusiastically. Hundreds of thousands of acres of hemp were grown, without any problems—just benefits.

It is time for our leaders to end our national energy/economic emergency as they once stopped Hitler: Permit our farmers to grow hemp, so America can once again become energy independent and smog free.

## ***For more information:***

On hemp or current efforts to restore hemp to America, send \$1 + a large Self-Addressed Stamped Envelope to:

**BACH / Business Alliance  
for Commerce in Hemp**  
P.O. Box 1716, El Cerrito CA 94530  
**(510) 215-8326.**

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*Suggested reading: Hemp: Lifeline to the Future* by Chris Conrad, and *Energy Farming in America*, by Lynn Osburn.