

PHOTO CAPTION: David Blume tried to publish his opus to ethanol more than twenty years ago, but Chevron's influence over the local public television station in San Francisco forced the cancellation of his television program and the near-confiscation of his manuscript

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The Still Revolution - Part 2

By Bill Moore

Conclusion of interview with 'Alcohol Is A Gas' author and permaculturist David Blume

Part One

"The simple answer is the bottom line," replies permaculturist and author David Blume, when I ask him how do we, as a society, encourage the farm community to switch from the petroleum-intensive, subsidy-dependent, industrial agricultural practiced today in America -- and much of the rest of the developed world -- to the kind of sustainable system he advocates in his book, [Alcohol Can Be A Gas](#).

Blume envisions the Carbohydrate Economy of the future involving a monumental -- but very doable -- shift away from the mono-crop, factory farm that is heavily reliant on fossil fuel-derived inputs, from fuels to pesticides to herbicide to fertilizers, back to a more integrated, holistic approach where what flows from the farm is a rich and enriching variety of wholesome commodities from renewable fuels to foods.

By "the simple answer is the bottom line", he means that if we provide the right incentives for our farmers, they'll quickly adapt more profitable crops and commodities; and in doing so, create a more natural, closed-loop system that is self-sustaining and ultimately more profitable to the farmer. This system, often referred to as *permaculture*, will improve the health of the soil, stop the poisoning of our waterways and

oceans, especially the "dead zone" off the Gulf Coast of Louisiana and Texas, and also eliminate, to a large measure, the problem of soil erosion.

And alcohol (ethanol) is a very real part of that vision, where more productive, sugar-rich crops like sugar beets, sugarcane and Jerusalem artichokes, in rotation with corn and sweet sorghum, can produce the fuels we need, without jeopardizing the planet's ability to feed us.

It's a bold and perhaps controversial vision, but one that Blume makes a strong case for within the 550 pages of his book. And the biggest question is, assuming he's right, how do we get there from here?

You can listen to the audio of Part 2 of our interview using either of the two MP3 players at the top of the page, or you may download the 5.88 MB file to your computer hard drive for playback on your favorite MP3 device. I also encourage you to listen to [Part One](#), as well.

IN BRIEF: Synopsis of Part 2 of Interview

- American farmers can rapidly adapt their practices when they have the necessary financial incentives. Case in point: when the price of a bushel of corn (maize) hit \$4 last year, they immediately planted an additional 14 million acres of corn. Of course, that surplus drove back down the price, but it illustrates how quickly they can adapt from year-to-year.

Alternatives to corn like sweet sorghum, sugarbeets and Jerusalem artichokes can produce 2-to-3 times the amount of alcohol per acre as corn, as well as generating a superior, protein-rich feed for livestock from the residue of the fermentation process.

- Prior to World War One, German farmers developed a system of cooperative distilleries that accepted the farmers' potatoes, converted it into alcohol and feed for livestock, keeping a small portion to help finance the operation of the distillery. Farmers in Washington State heard about it and sent a representative to Germany to gather information. After a year in Europe, he returned with everything the Washington Grange (the predecessor of the Farmer's Union) need to know to set up a similar system. Blume says the Rockefeller Trust got the local police to confiscate all the literature and plans, labeling it dangerous German propaganda, effectively squashing the movement.
- Our current mono-culture agriculture system can never be sustainable, Blume argues, because it is so heavily dependent on a depletable resource: petroleum. In addition, nature is not a machine. It is far more complex and inter-dependent. Mono-cropping only encourages insect and disease infestations, requiring the use of pesticides, resulting in a fruitless battle with Mother Nature.

But since there is no market for crops other than corn and soybeans, farmers can't justify growing the 6-8 alternatives that Blume thinks make the most sense. But when you bring farm-based, small-scale alcohol production into the picture, the economics start to look much better, he contends. Instead of growing a low-value commodity crop like corn, alcohol is the starting point of a shift that allows the farmer to convert the output of his land to higher value products, including mushrooms, tilapia fish, or earthworms and their castings, which are a rich natural fertilizer, from the "waste" of the distillery process. Five cents of corn can produce \$3 worth of farm-raised fish or \$7-8 worth of shiitake mushrooms. Under our current system, feedlot owners and beef processes take that 5 cents worth of corn and turn it into \$14 steaks, leaving the farmer with little to show for his efforts other than his subsidy check.

- When Blume tried to publish the book in 1983, he was literally stopped at the printing press when KQED, the Public Broadcast System affiliate in San Francisco -- allegedly under pressure

from Chevron, a major corporate underwriter -- cancelled nationwide distribution ten-part television series to 140 other PBS stations, of which the book was a companion piece, that Blume had produced for them. After a protracted legal battle, Blume was only able to salvage his manuscript, which served as the basis of his current printing

- Blume now works as an ecological agriculture and energy consultant all over the world showing corporations how to turn waste into value material. He is starting to focus on pushing the cultivation and harvesting of kelp as a promising fuel source. He has just started working with the government of Bermuda on using cattail marshes to clean up sewage and generate energy. An acre of sewage-fed cattails can produce 7,500 to 10,000 gallons of ethanol, compared to 250 gallons from corn.
- *Alcohol Can Be A Gas* is being very well received, Blume told me. He is encouraged by how people are responding to it, noting that using its instructions, a small-scale plant that produces enough fuel for a small community of even 100 people can provide a nice middle class income for willing entrepreneurs. It allows the common man, the average person, to take a better, more hopeful pathway towards our energy future than the destructive, monopolistic one we are now on.
- Blume sees electric vehicles as making sense, but only once we've moved beyond our reliance on coal and nuclear power. In the interim, he believes using "liquid sunshine" in our IC engine cars as being more practical. Instead of using grid power, he favors using ethanol to run a home-built, IC engine-based co-generator unit to produce electricity to run the house and charge the electric car; and you get all your hot water in the process.

He believes that charging electric cars and plug-in hybrids at night using off-peak power only gives a new market for dirty fuels like coal.

He notes that Fiat made a small co-generator unit in the late 1970s -- [TOTEM](#) -- that runs on a multiple number of fuels. How to build your own is explained in the book, along with detailed instructions on building your own distillery/refinery.

- In conclusion, he advised EV World readers to visit the [Permaculture web site](#), where you'll find lots of information about alcohol if you can't afford to buy the \$47 book.