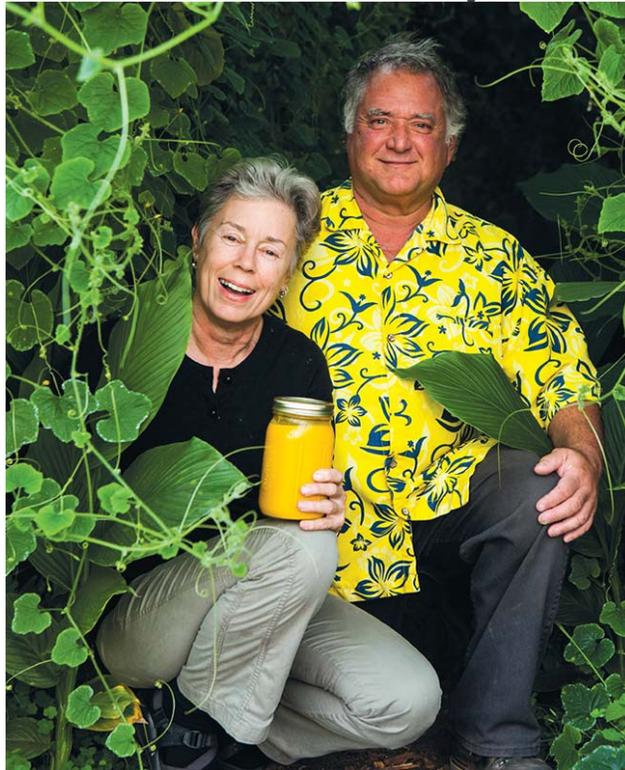


## EDIBLE INNOVATORS: STILL FARMING

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by Deborah Luhrman

Organic vegetables and “the world’s second oldest profession” go hand in hand on Whiskey Hill



David Blume and partner Jannet Shraer and their turmeric tonic

PHOTOGRAPHY BY MICHELLE MAGDALENA

Rowdy cantinas and brothels once lined the stretch of road now called Freedom Boulevard, just outside Watsonville. Gambling, girls and lots of drinking went on there in the 1800s, earning it the name Whiskey Hill—at least until law-and-order types decided a different name might help change the area’s unsavory character. But residents rejected efforts to be tamed and chose the name Freedom, as in freedom to party on. Up on the ridge towards the ocean, stills were hidden in the forest and used to make whiskey and aguardiente for the saloons below. They were shut down during Prohibition, but now the stills are back as part of a multi-faceted project to sell distillation equipment around the world and grow local organic produce for Monterey Bay area markets. Aptly enough, the operation is called Whiskey Hill Farms.

The 14-acre property on Calabasas Road includes five acres of glass greenhouses which once grew roses for Kato Cut Flowers. Renowned alternative fuel activist David Blume and his partner Jannet Schraer bought the place in 2014 and have spent the past two years working to get both businesses up and running.

What was once a giant packing shed now houses fermentation tanks and 12-foothigh distillation towers where Blume has been practicing what he calls “mankind’s second oldest profession”—making alcohol.

The objective is to manufacture and sell distillation equipment that converts food wastes into alcohol, which can then be used for dozens of purposes from fuel to vodka. Inside the hothouses, the couple is growing tropical crops like ginger and turmeric, alongside out-of-season produce such as melons and cucumbers—using ingenious low-tech methods that include using water heated in a giant compost pile to keep their plants warm.

## ALCOHOL AS FUEL

Part mad scientist and part folksy farmer, David Blume has been a teacher, TV host, author and organic agriculture consultant for the USDA around the world. Now 60, he has no shortage of provocative opinions and he is brimming with several lifetimes’ worth of ideas for the farm.

“My background is in ecology, which is a science. Environmentalism is a religion, and ecology is a science. It’s a good place to come from to be a farmer,” he says.

His interest in alternative fuels began at San Francisco State University, when a professor challenged him by saying he could run a car on home-brewed beer.

“I went to the library thinking that gasoline was the only fuel in the world and found an enormous stack of books from right after Prohibition about how to use alcohol as fuel, mostly written by contractors for the USDA. I was shocked!” he recalls. Then when the oil crisis hit in the 1970s he began making alcohol fuel, also known as ethanol, on a small scale and taught 7,000 other people how to do it.

He produced and hosted a 10-part series called Alcohol as Fuel that aired on KQED television and was slated to go national, but was thwarted, he claims, by the oil industry. “There is a long history of dirty tricks from big oil—keeping people confused and off-balance about alcohol—going all the way back to Prohibition, which was actually completely funded by Rockefeller to take alcohol off the market as a fuel and had very little to do with drinking,” he says.

Public perceptions that ethanol production— especially from corn in the Midwest— takes valuable farmland out of food production and drives up land prices are unfounded, he claims.

“We almost never say ethanol because oil companies have tarred and feathered that word so thoroughly in the press that people automatically have a reaction to it,” he says. Blume authored a 600-page book called *Alcohol Can Be a Gas!*, calling for an ethanol revolution, exploding myths about the food vs. fuel debate and teaching readers how to make the switch.

He says alcohol is a vastly superior fuel, giving off just 1% of the emissions of gasoline—and consequently, engines stay clean and last years longer. In addition to providing energy independence, small-scale alcohol production can convert food waste to energy and power cook stoves.

“Over half the world’s population, or 3 billion people, cook their food over wood, or charcoal or kerosene, and it is a major cause of deforestation,” he says. “Four million women and children are killed each year with lung-related diseases from breathing wood smoke from indoor cooking fires.”



cattails, which produce 20 times the biofuel per acre as corn



Blume's demonstration of the cleaner-burning nature of alcohol, on left, as compared to gasoline



Blume with one of his stills



the view from Whiskey Hill Farms

## ECO MOONSHINE

The distillation part of the farm sells small-scale bio-refineries capable of using a variety of raw materials to produce alcohol.'

The first one was sold in South Africa earlier this year to make alcohol fuel from sorghum, but there are also projects in the works with The Gambia for converting cassava, with Canadian farmers to convert sugar beets and with an Atlanta frozen food plant to turn leftover breadings from fish sticks into alcohol fuel.

Blume is working with Del Monte and Dole in the Central Valley to start converting wastes from fruit cocktail processing, which cost the company a lot of money to get rid of. While the distillation equipment costs several million dollars, he says the investment can be recouped in about three years with average use.

Closer to home, Blume is in talks with Martinelli's in Watsonville on a project that would convert apple peels left over after juice and cider pressing into alcohol to power local school buses. The fuel would help the buses run cleaner and last longer.

Of course, the resulting alcohol can also be used for drinking, and Blume is applying for a craft distillery license so he can sell some of his experiments making whiskey from crops like prickly pears, passion fruit and cardoons. "We're going to have a lot of unusual beverages here," he predicts.

Over the years Blume has put his ecological principles to work running an organic CSA in Woodside called Our Farm and by consulting as an expert in organic pest management.

One assignment took him to Montana to fight a plague of grasshoppers in the vast northern wheat fields. "I got there and said, 'You're so lucky!' because that's my answer to everything," he recalls. "They thought I must be crazy, but I said 'No, no, no. This is a massive resource that's come to your property, and you didn't even ask for it.'"

Blume asked the farmers to use their bulldozers to build some ponds and fill them with water. Then they took weather balloons, spray painted them bright yellow and placed one in the middle of each pond.

"This was the only colorful thing for 40 miles, and the grasshoppers thought it was a flower and came in hordes," he explains. "They bounced off the balloons and ended up in the drink."

So the farmers started scooping tons and tons of dead grasshoppers out of the ponds to spread on their land, gaining enough fertility to last for 50 years. "They turned a disaster into the biggest fertilizer bonanza ever," he recalls. "That's what I do. I look at where there's a surplus and figure out how to use that surplus."

“Farmers have way too much work to do, and fighting the bugs is a time consuming effort if you don’t have nature taking care of it for you,” says David Blume.

## TROPICAL CROPS

Out in the greenhouses, many of Blume’s theories are put into practice. For example, plastic hoses run through a giant 25-foot-long compost pile and then out into the beds, where they are spaced every four feet. Water is pumped through the system and, as it passes through the compost, gets heated from the natural decomposition happening in the compost. Then in turn, it warms up the soil to tropical temperatures and helps keep the greenhouse toasty. Other innovations include an anaerobic methane digester to recycle gases given off in the distillation process; an aerobic nitrogen digester for managing runoff; and fish ponds to produce fertilizer.

Using these methods, Whiskey Hill is growing 15 tons of Hawaiian ginger and galangal, as well as a massive crop of 150 tons of turmeric—a rhizome that is commonly used in Indian curries and offers strong anti-inflammatory properties.

“It’s extremely popular and, unlike fads, this stuff actually works medically,” says Blume.

Other crops currently under cultivation include Persian cucumbers, melons, Osaka purple mustard, sweet Japanese turnips and a wide variety of herbs, including tarragon, dill, basil and cilantro.

In order to optimize space, a high priority is given to exotic vining plants that grow upwards, allowing turmeric and other crops to be cultivated underneath.

Experiments are underway with sacha inchi, an Amazonian nut that grows on vines. “It’s quite profitable, very tasty and makes an incredible cooking oil,” he says.

To keep bugs at bay, Blume uses what he affectionately calls “the night crew,” a platoon of frogs, toads and lizards.

“Farmers have way too much work to do, and fighting the bugs is a time consuming effort if you don’t have nature taking care of it for you,” he maintains.

To keep the night crew happy, there are several “frog condominiums” in each greenhouse. The condos are basically a pile of big rocks inside a wire cage, with an algae-filled pond nearby.

Ever the evangelist for his twin passions of regenerative agriculture and “the world’s second oldest profession,” Blume enjoys giving tours to visiting farmers and the general public.

During the Corralitos Open Farms Tours last fall, his eyes twinkled as he ignited two identical bowls of clear liquid sitting side by side in the lab. On the right, the bowl filled with gasoline gave off a big smoky yellow flame, while the bowl on the left filled with alcohol burned cleanly, with a small blue flame and no trace of soot—demonstrating that alcohol is the perfect fuel and reminding us that sometimes we have to look to the past to find our way to a better future.

**Deborah Luhrman** is deputy editor of Edible Monterey Bay and editor of our weekly newsletter. A lifelong journalist, she has reported from around the globe, but now prefers covering our flourishing local food scene and growing her own vegetables in the Santa Cruz Mountains.

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## COOKING WITH TURMERIC

Turmeric is having a moment. It's the "it" ingredient in everything from soups to tonics. But turmeric is appreciated for much more than its peppery taste and the way it turns everything it touches bright yellow.

Traditionally used in Ayurvedic and Chinese medicine, researchers believe that turmeric has more than 100 therapeutic uses.

"It fights inflammation, and it's one of those herbal things that actually works," says David Blume, who is growing 150 tons of turmeric this year in greenhouses at Whiskey Hill Farms in Watsonville. "People with arthritis can actually move their hands again after taking turmeric, ulcers go away, heart disease reduces."

Local chefs are trying to work turmeric into more of their dishes, both for health and as an exotic flavor ingredient.

"It's got a great earthy flavor," says chef and caterer Ella King, who owns Café Ella and Ella's at the Airport in Watsonville.

She likes to use powdered turmeric in a dry rub—combining it with smoked paprika, cinnamon and salt—and sprinkles it over chicken, pork or even firm-fleshed fish like opah or salmon before cooking. She also dusts fried eggs with turmeric before flipping them over, because it adds flavor and color to the golden crispy edges.

When using fresh turmeric, she shaves it thinly with a mandolin or a vegetable peeler and adds to oven-roasted vegetables. It can stain fingers and cutting boards, "But it's not as bad as working with beets," she adds.