

FEEDSTOCKS FOR URBAN/ SUBURBAN DISTILLERS

If you don't grow your own feedstock, you will need to buy it or find a free source for it. On a farm, the mash byproduct has a variety of beneficial uses, but in an urban plant it can be a nuisance to dispose of. A farmer spends little, if anything, on transportation to bring his crop to his distilling area, but urban distillers have to arrange to collect their raw materials and have them moved to their plant. Such expenditures are critical in determining final fuel costs.

GILROY GARLIC

After hosting me on his talk show, the amiable country-western DJ at KFAT radio in California's Salinas Valley suggested we mosey on down to the local watering hole. Since he was buying, I went. We put a quarter in the jukebox and got to talking about Hank Williams. A burly farmer on my left punched me on the shoulder and said, "I knew Hank. He lived with me and the wife up near Sacramento." He patted his wife's hand. "She gave ol' Hank a pretty bad time—*Your Cheatin' Heart* was written for her."

Well, one thing led to another, and we discovered that this fellow grows the best garlic in Gilroy—garlic so good he doesn't even bother competing in the annual Garlic Festival. His garlic bulbs are exported to Japan, where they make garlic pills out of them. He said he dumped four to five tons a day of substandard garlic during harvest.

By this time, I was pretty well-lubricated, so I asked him, since he knew so much about garlic, did he know how much sugar it contains? Without hesitation, he told me that it's usually around 16%, but that his garlic contained over 18% sugar. My eyes bugged out, and I told him that he should be fermenting his waste, and making alcohol to run his farm machinery.

The farmer laughed. "Run my machinery on it? Hell, it's too good for that. I make my own 190-proof—and, like my garlic, it's the best in its way, too. You want to try a taste? I've got some out in the truck."

His wife was getting nervous. People in the bar began to stare at us. The disc jockey was amazed. We do a show about alcohol, and here's a man who's been moonshining longer than we've been alive—with garlic.

That same night at the bar, I met the owner of the local dump where the packing houses take all their throwaways. He introduced me to a member of the city council who wanted to know if they could run their city vehicles on alcohol.

So, if you live in a rural area and are looking for feedstock, go to the bar where the farmers go and put a quarter in the jukebox.

Ideally, you would want to be able to charge a **tipping fee** to take the material off the producer's hands. Transportation fuel is so expensive nowadays that, if you use a pickup truck, it's rarely worthwhile to go as far as 75 miles to collect your feedstocks. It's almost out of the question at 100 miles. Clearly, feedstocks closer to home have a big advantage over those an hour away.

A major factor in choosing a good feedstock is how many gallons of fuel per ton you'll be able to make. This is quite a different calculation than gallons per acre. For instance, since fruit is mostly water, fruit waste (and most other sugar crops) yields only around 20 gallons of alcohol per ton. You might not want to drive 75 miles for fruit waste when a one-ton pickup load uses as much as six or seven gallons of fuel, leaving you only a 11- to 12-gallon net yield for your effort.

On the other hand, most dry, starchy crops yield 85+ gallons of fuel per ton, and some food processing waste, such as noodles or candy, top out at over 115 gallons per ton. Driving 75 miles for a ton of starchy material would net you about 77 gallons of fuel. If you're thinking in terms of a semi-large cooperative, you may find it advantageous to look for a site in an industrial area where food is processed. The cooperative I joined in the 1980s in the San Francisco Bay Area was located within a 30-mile radius of over 80 major food processing plants and canneries.

There's a lot more waste available than you'd ever imagine, but if you do *buy* a feedstock, be careful of its cost. Ideally, you want your final price per gallon (calculated to include your byproducts) to cost you less than today's price of fuel.



Fig. 6-4

Here are some further considerations for urban distillers: If the waste you want is being hauled away under contract by a disposal service, can you arrange for that company to deliver it to your land rather than to a commercial dump site? If the waste hauler agrees to deliver it, will they pay you to dump it there (woo-hoo!), will you take it off their hands for free (high five!), or will you have to pay a little to reimburse them for coming out of their way?

If you're hauling the waste material yourself, do you need to supply containers for it, such as 55-gallon drums or a tank for liquid waste? How are you going to lift or pump the stuff into your truck? How often do you have to come and take it away? If you are not responsible about reliably collecting the feedstock, you will lose that source. Is it a regular, dependable source? Is your need for fuel well matched to the quantity of feedstock that you need to pick up? If your feedstock is not available regularly and you get it all at once, do you have proper storage space at your site? If you do, you'll be able to handle a greater variety of feedstocks.

"As a country, we need to look inward for the answers to the energy of the future. We need to bring down our demands for oil, rebuild some bridges and highways, and allow the farmers to grow something that replenishes the soil. Those who don't know what that is, should do some research. The problem is not in Iraq, and the answers are not in Iran."

—MERLE HAGGARD, JUNE 2003

Will your feedstock yield saleable byproducts? If not, will you be able to handle your own waste disposal?

How much alcohol do you need in a month, and how many trips do you have to make to produce it? Is convenience more important to you than low price? If so, you may want to purchase an easily handled feedstock, molasses for instance, and have it delivered to you.

Finally, what are your zoning laws? Who are your neighbors? If you're experimenting with some smelly material as a feedstock, you may not be the most popular kid on the block. The list of

Fig. 6-5

