

Chapter 6—Cooking Wood, Smoke Wood, and Flavorwood

Description of the Product and Its Uses

Woods such as mesquite, alder, apple, cherry, pecan, and hickory are used as natural flavor enhancers in grill cooking either in homes or restaurants. The market for cooking wood is in the form of sawdust, chips, chunks, and roundwood. The chips and chunks are primarily for the residential consumer; the sawdust, primarily for the smoking and liquid smoke business; and the roundwood, for the restaurant trade. Usually, chips are used in conjunction with charcoal, while chunks are used by themselves as a fuel source for smokers (table 6-1).

Table 6-1. Wood used as natural flavor enhancers in grill cooking and food processing

Alder	Mesquite
Apple	Oak
Bigleaf maple	Sugar maple
Cherry	Tan oak
Hickory	Vine maple
Madrone	

Market and Competition Considerations

Apart from charcoal, a number of small entrepreneurs have tried entering the cooking wood (also called smokewood or flavorwood) business in the past few years. The cooking wood can be either in the form of chips, chunks, or roundwood (firewood) size. The industry enjoyed a period of very rapid growth several years ago, and many small companies entered the market because it is a relatively easy operation to put together, requiring only a wood chipper and a bagging plant. The annual gross sales in cooking wood is estimated at \$18 million to \$20 million.

Mesquite wood in particular enjoyed a high popularity in chip and chunk form because of good marketing. Mesquite wood is an example of a product which people are willing to pay more for because it looks good, smells good, and doesn't come off on one's hands. Even the word "mesquite" has a healthy and appealing sound to it, some feel.

At present, however, the market for cooking wood has leveled off to modest growth. There are already several cooking wood products on the market, and a few relatively large companies in Texas dominate the market. There are also several small companies around the country. But for every company that has been able to stay in business, a couple of dozen have not made it. Any new entrepreneur had better "know the business" before getting into the cooking wood industry.

For example, a new entrepreneur must be prepared to enter with sufficient volume to make enough money to stay in business. The retail price of cooking wood runs between \$3 and \$3.50 for a 5-pound bag; the profit may be only \$0.06 to \$0.08 a pound. A very large volume is required to keep a business going. An operator must be prepared to ship out at least a truckload a week (about 40,000 pounds) year-round to make a profit.

Quality control is also critical for cooking wood. At one point several years ago, there was a problem with green wood and wood infested with insects. It must be dried, treated for insects, and packaged well.

The hardest hurdle for the small producer of natural charcoal or smokewood is "getting it on the shelf." Getting the grocery store buyer to agree to place a new item on the shelf requires paying a "slotting allowance" to get the item into the system. This could be perhaps \$5,000 an item.

While the cooking wood products have a place on the shelves now, it will take several years for this industry to grow. While this niche market also has some potential and consumers have been trying new wood products for cooking, the flavorwood or smokewood industry is very, very small in comparison with the charcoal briquette market. For example, about 25 million pounds of smokewood are sold annually in this country, compared to about 90 tons of charcoal briquettes. The cost of chunk wood is about 10 percent higher than charcoal just because the volume of product being produced is so much less.

In the opinion of the Barbecue Industry Association (BIA), there are not yet very many users of new cooking woods. Several small businesses in the past few years have started quickly, with little investment, and gone out of business just as quickly. Only a few have succeeded over the long haul. However, as in the charcoal business, if one can come up with a unique product (such as, a new

flavor) and a reliable distribution and marketing system, he or she will have a good chance. For example, wood briquettes are a new item on the market that are used in place of charcoal and are especially appealing to the environmentally conscious consumer who wants no lighter fluid associated with charcoal. The wood briquettes are held together with beeswax, which ignites easily.

Sawdust from mesquite and hickory is sold to companies that produce liquid smoke. This product is primarily manufactured by two or three companies, such as Red Arrow. Chips and sawdust of flavorwoods are also sold to the meat smoking industries, such as Jimmy Dean.

The avenue for marketing this product is likely through the National Food Brokers Association and its annual meetings, attended by smoked meat companies. Also, within each State are probably lists of smoked meat products and their producers.

Distribution and Packaging

Successful cooking wood businesses distribute one of three ways: direct to chain restaurants, through food brokers, or through specialty markets, such as the gift market. The food brokers are the mechanism that will generate the most volume; however, this approach requires a large volume and close quality control. The food brokers may contract for three to four trucks a week during the peak season, which shuts out a lot of small producers. However, it does offer the opportunity for small producers to sell to established companies.

It is particularly important for the entrepreneur in the charcoal or cooking wood business to identify logical ties, such as grill manufacturers; fish, meat and poultry producers; and barbecue contests and campgrounds as outlets to distribute and promote the product.

Packaging is primarily done by the cubic inch, although Safeway and other merchandisers are using weight. Caution is advised if weight is used, for if the wood is semidry, it may lose enough weight in storage or shipment to fall below the specified package weight, which brings problems with deceptive advertising laws from the Federal Trade Commission. Volume is the most practical means of packaging because a woodlike mesquite will lose about one-half of its weight when dried from the green state but only about 5 percent of its volume. It is advisable to always package with about 5 to 10 percent more wood by volume than what the label states.

Various types of packaging can be used. There are plastic packages with and without air holes, paper packages with wax interior coating without holes, and also a net-type sack for use with chunks. One of the keys to good packaging is to correctly screen the wood to

eliminate most of the fines and loose bark. This alleviates the problem of fines, sawdust, and bark falling out either in the marketplace or in a customer's home. The fines can be sold as another product.

It seems best to market a product in a package that has holes. This would be a stopgap measure in case damp wood gets through the production system.

Using mesquite as an example, mesquite wood weighs about 2 pounds per 100 cubic inches. A good package might be a 100- to 200-cubic-inch (2- to 3-pound) package and also a 500-cubic-inch package (approximately 10 pounds). The small size would go to consumers who only want a lightweight package, and the larger would go to the consumer who (1) buys in "bulk" to save having to buy all of the time or run back to the store at the last moment and (2) thinks, whether true or not, that one saves in cost per unit whenever one buys larger packages.

Equipment Needs, Costs, and Suppliers

Wood drying. Cooking wood must be dried before packaging and shipping. Options are to only harvest and package wood from standing trees that have been dead long enough that the wood is already well dried, or to harvest and then dry green wood. Depending on climate, the time lag between harvest and shipment may suffice to dry the wood sufficiently. If the wood is bulk-piled, it should be covered during heavy rains.

Although expensive, one can dry or partially dry wood using a number of methods. Some companies use old grain or rice dryers. Another way is to use a rotary drum dryer, typically used in the particleboard industry, which rolls the chips or chunks in a long cylindrical chamber while hot air is passed through the chips. The saturated hot air is purged from the system out of the far end. Because they are rather expensive, commercial dryers are not generally feasible for the small entrepreneur.

Regardless of the method of drying, the wood must be dried to the proper moisture content, about 14 to 20 percent for mesquite. This will alleviate potential problems of odor and mildew in the marketplace.

The rate of wood drying is primarily a function of wood size, temperature, retention time, and chamber size. Approximate time of drying should be worked out while one sizes the equipment. Saving enough dry wood to sell while allowing green wood to dry out is important in stabilizing a small business's cash flow.

Chunking and chipping. Cooking wood is chipped and chunked in a variety of ways. One mesquite wood company has the dry wood cut into disks with a cutoff circle saw. The disks are about 2 inches thick. These

disks are then run through a chunker which splits them into six to eight chunks about 2 inches in diameter. The product is then screened into different-size fractions. The small particles are sold as chips. The fines and sawdust are sold to the meat smoking and the liquid smoke industries. Other companies use a regular wood chipper to produce uniform-sized chips like pulpwood chips.

Insect control. All insects on cooking wood must be killed. If not, they will come out of the package in stores, homes, and restaurants and can ruin a business. Most companies are using insecticide chemicals such as aluminum and magnesium phosphide fumigants or methyl bromide. At the time of printing of this publication, methyl bromide has been scheduled by EPA to be phased out by year 2000. The Texas Department of Agriculture has approved these two chemicals (and only these two) for treatment of mesquite cooking wood.

Another way to kill insects is with heat. It is necessary for the wood to reach a temperature of 150°F for 2 to 3 hours or 120°F for 10 to 12 hours to effectively kill insects. One can kill the insects and dry the wood at the same time. Once the wood is treated, it must be isolated from untreated wood while it is being processed and stored or else insects will reinfest quite readily.

A wide variety of equipment for turning out cooking wood, from very labor-intensive to very advanced, can be found. The more successful entrepreneurs tend to be those whose equipment investment is relatively small, either with homemade equipment or adapted equipment. It is important to minimize overhead and remain very flexible. Some use three or four small chippers or small dryers instead of large pieces of equipment. Facilities to keep the wood out of the weather, and possibly a special area to treat the wood for insects, are also needed. Most do not collect their own wood. Local people will supply it. In the case of mesquite, most ranchers are glad to have the wood taken off their land and do not charge anything for it. A bare minimum of \$20,000 for a chipper would be necessary.

The wood is supplied at firewood prices of \$60 to \$80 a cord for mesquite and somewhat more for fruitwoods. The average retail sale is one to three bags per week per store at a large chain. A Mom and Pop store would sell considerably less. Each bag that sells for \$1.20 would net perhaps \$0.40. It is easy to see how, given the tiny market and the fact that there are already several substantial companies in the business, it is not a strong market potential.

Most of the cooking wood industry is labor-intensive. It is a cottage industry, requiring small-scale equipment and a lot of handwork in sizing and bagging.

Resource Conservation Considerations

No special resource conservation considerations are needed.

Profile

When George Wartsbaugh, owner of Barbecue Wood Flavors in Ennis, Texas, began producing mesquite chunks for cooking in 1984, he believed that if his small company could cut and sell 500 cords of wood a year, it would be doing a lot of business. At that time he was using mesquite wood that he was hired to clear from range in his region of Texas, and cutting the mesquite wood into chunks out in his backyard. He merged his company with Weber Grill a few years later and from that merger gained the critical marketing arm needed to reach the people they needed to reach. Today, Barbecue Wood Flavors sells millions of pounds a year and has become very successful, selling hickory and mesquite chunks and a wide variety of fruitwood chips that are purchased from many regions of the country. In fact, they are probably the Nation's largest manufacturer of wood chunks and the second largest producer of chips. During peak season, the company has about 24 employees.

The company buys woods such as alder, apple, and cherry for about \$100 per cord. Packages are 1 to 3 pounds in weight and retail for \$0.79 to \$2.00 per package, with retailers normally making 20 to 40 percent profit margin. There is now enough demand for flavorwoods that several charcoal companies have entered the market, and Barbecue Wood Flavors also provides "private label wood" for several stores and charcoal companies.

Considerations for a Rural Development Strategy

In this business, the lower the overhead, the better the potential success rate. A "quick in, quick out" strategy built around a unique product is also an approach. New flavors that offer as natural a cooking process as possible are preferred. Another approach, discussed in the charcoal section, would be for a community to start a combination retail and leased space grocery store. Instead of having buyers choose which products to buy and display, small entrepreneurs selling items for general household use would lease small amounts of store space (Wartsbaugh, personal communication).

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Resources

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mesquite for cooking wood is available. Inquire as to
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