

How Green is Your Grill?

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Grilling is a great way to cook fresh meats and vegetables quickly, make a meal more festive, and delegate some of the cooking. Cooking organically is all the rage, but which grilling method is the best for the environment...and for you?

When getting ready to grill, there are several types of fuels to choose from -- gas, electricity or charcoal. Each has its own environmental and monetary costs.

The most common grilling fuel is natural gas. It heats quickly and leaves a very small carbon footprint. Once the grill and gas tank are purchased, it is very cost effective, just pennies to operate. But the wood smoke flavor is missing from this method.

Similarly, electric grills don't leave much of a carbon footprint. But, since they are powered by electricity, they are more costly to operate. And, again, very little flavor is added to the food.



A new producer in Amherst County takes advantage of winter weather and cool temperatures to produce his first batch of natural hardwood lump charcoal. Photo by:

Charcoal, the third fuel option, is made two different ways; one method is much more organic than the other. The commercial method uses leftover sawdust, combined with binders, including coal dust, sodium nitrate, limestone, borax and lighter fluids, and bakes them into briquettes. Regular and self-lighting charcoal briquettes pollute the environment with volatile organic compounds (VOCs), a dangerous ozone-causing pollutant. Every year Americans alone release over 14,000 tons of VOCs into the

atmosphere from the 46,000 tons of lighter fluid burned through charcoal grills. The ash from charcoal briquettes contains chemical residues and must be disposed of in the garbage.

Natural lump hardwood charcoal, on the other hand, is carbon neutral or even slightly carbon negative if the fines are used as a bio-char soil amendment. Nothing compares to the flavor of natural lump hardwood charcoal -- it is the fuel of choice for barbeque masters. This type of charcoal is made from wood allowed to dry in a kiln. This process releases the same amount of carbon dioxide as if the wood was allowed to decay

on its own in the forest, and it imparts a smoky flavor to foods that complements meats, poultry, fish and vegetables. Hardwood lump charcoal burns hotter and cleaner than briquettes and is much easier to light -- even without lighter fluid. You also know where it came from, what it contains and what was done to it *en route*. Even the leftover ash is good for the environment, as its alkaline properties neutralize acidic soils.



Natural hardwood lump charcoal can be produced by families. Shown are three generations of the Slagle family from Halifax who participate in a small producer grant-funded project. This family earns a living as professional loggers. Photo by: Jason Fisher, VCE.

Here are a few positive points regarding natural hardwood lump charcoal:

- 90% pure carbon (moisture, ash, volatiles)
- no petroleum additives, binders, or fillers
- no unwanted starter fluid taste
- faster lighting times
- better control over temperature
- long burn times
- reusable
- easily extinguished
- impart excellent flavor and aroma to foods
- less expensive than briquettes
- can be marketed locally

Some studies suggest an elevated cancer risk related to eating charcoal-grilled foods. Current research shows that eating moderate amounts of grilled meats that have been cooked without charring does not impose a health risk. Precooking meats in the microwave before placing them on the grill, and then using slow and steady heat, minimizes cancer risks. Cutting away fats and any charred areas (which are the real culprits) also reduces risk.

In addition, hardwood lump charcoal provides an opportunity to use low-value wood from forest management activities. For example, small trees removed in thinning operations and wood of exotic invasive species, such as tree-of-heaven, make excellent charcoal. In fact, over two acres of tree-of-heaven have been cleared in Southside and made into charcoal. Lump charcoal consumers have found that cooking with natural charcoal makes good sense for the economy and the environment.

Jason Fisher, Extension Agent, Forestry and Natural Resources, has recently formed a working group of landowners who have expressed interest in producing natural lump charcoal as a value-added forestry enterprise. The startup cost for this project (nearly \$5,000) has been secured through grants. The group meets quarterly for program planning and market updates. The theme of “Local Fuel for Local Food” is the slogan of choice in Virginia. Increasing demand in the region may possibly lead to a future cooperative arrangement. Farmer’s and community markets have been strong partners. Additional partnering agencies include Virginia Cooperative Extension, Virginia Department of Forestry, Virginia Tech Department of Forest Resources and Environmental Conservation, New River Highlands Resource Conservation and Development Council, Virginia Master Gardeners, and Virginia Master Naturalists.

The public may obtain a list of hardwood lump charcoal suppliers in Southside Virginia by contacting Jason Fisher.

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