

Fire logs made from lawn clippings offer earth-friendly option

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Artificial logs that create a cheerful and welcoming blaze in your fireplace can be made from a perhaps surprising source: grass clippings.

U. S. [Department of Agriculture](#) (USDA) chemist Syed H. Imam and his colleagues have shown that lawn clippings can be mixed with other [natural compounds](#) to yield ecofriendly fire logs that burn brightly and evenly. The same formula can be used to produce pellets ready for the hopper of a pellet-burning stove, or for making fire-starting sticks for use with firewood at a campfire.

Imam is with the Bioproduct Chemistry and Engineering Research Unit at the Agricultural Research Service (ARS) Western Regional Research Center in Albany, Calif. ARS is USDA's chief intramural scientific research agency.

Mowing front and backyard lawns, plus fields at parks, schools and other city and suburban landscapes, creates tons of clippings that typically end up in [landfills](#), Imam noted.

Bio-based fire logs that Imam's team developed contain no petroleum-derived chemicals, so they burn cleaner, emitting fewer potentially polluting [volatile organic compounds](#), or VOCs.

Clippings make up about 20 to 60 percent of the composition of the logs by weight. About 40 to 80 percent is made up of plant-derived waxes or oils, referred to as binders. They add durability and help the logs, pellets,

or sticks retain their shape. Binders also boost the energy value of the logs, and extend the burn time.

[Plant oils](#) that lend color and aroma, and repel insects—a plus when using the logs outdoors—can be added to the log formulation. Imam has at least a dozen fragrant oils to suggest, such as cedar, eucalyptus, lavender, orange, peppermint, and tea tree.

Though the Albany team's focus was on clippings, the logs can also be made from agricultural harvest leftovers such as rice straw or cornstalks.

More information: Read more about this research in the November/December 2012 issue of Agricultural Research magazine. www.ars.usda.gov/is/AR/archive/nov12/logs1112.htm

Provided by United States Department of Agriculture

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