

ETHANOL

AGE OLD ALCHEMY

Fermentation and distillation of ethanol can be done on any scale, large or small, anywhere in the world.



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PRODUCTION

Fuel ethanol has been produced and used for many centuries. In fact, Henry Ford's "Model T" automobile was developed to run on ethanol. **Ethanol can be made from any sugary or starchy raw material.** As technology continues to advance, it will be made from cellulose, a complex form of sugar. Today, ethanol is made mostly from sugarcane, sugar beets, sweet sorghum, cassava, potatoes and maize. But it can be made from deep-rooted agro forestry crops that store carbon in the soil. It can also be made from nuisance plants and processing wastes that have no value. Ethanol can be sustainably produced through climate-smart agriculture, enabling the farmer to thrive and produce more food.

SAFETY

Ethanol fuel is perfect for household cooking needs. It burns cleanly, with no soot or smoke, is safe for handling, and can be extinguished with water. The ethanol molecule delivers energy from clean-burning hydrogen and has oxygen that prevents the formation of dangerous carbon monoxide. Fuel ethanol is much stronger than beverage alcohol and denatured to prevent misuse. Project Gaia uses a denaturing protocol that makes the fuel very bitter but not poisonous like kerosene or petroleum fuels. Project Gaia encourages local distillers to produce fuel for cooking because it is a profitable and reliable market.

OUR PROJECTS

PGI has worked extensively with ethanol in our projects in Ethiopia, Haiti, Brazil, Madagascar, Nigeria and Kenva. In Ethiopia, we have worked with the UNHCR to provide ethanol stoves in refugee camps. Ethanol is produced locally in state-run distilleries and now in our own microdistillerv-we hope the first of many in Ethiopia. Our work has shown that ethanol is a sustainable alternative to solid biomass fuels and brings many including gender advantages. empowerment, rural employment, clean indoor air, environmental benefit and climate change adaptation.



