

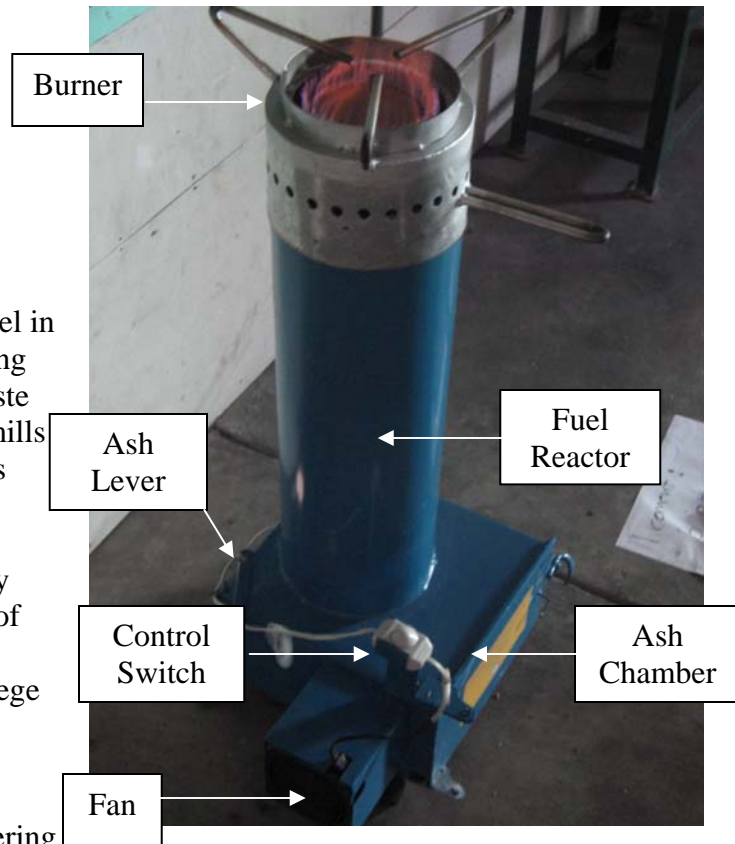
GAS STOVE USING RICE HUSK AS FUEL*

Engr. Alexis Belonio
Project Director
Appropriate Technology Center
Central Philippine University
Iloilo City, Philippines

Good news to rural households!!

You can now reduce the cost of fuel in cooking your food! Instead of using the conventional gas fuel, agri-waste fuel that can be found in the rice mills can be now converted into gaseous blue flame for cooking.

The rice husk gas stove technology was developed at the Department of Agricultural Engineering and Environmental Management, College of Agriculture, Central Philippine University in Iloilo City with the assistance from the group of undergraduate agricultural engineering students Juvy Almirante, Jewel Von Limsiaco, Yvonne Herbo, and Daniel Belonio.



The Ricehusk Gas Stove as shown consists of (1) Gas Burner - where the gasified fuel is burned, (2) Fuel Reactor - where rice husk is gasified during operation by burning the fuel with limited amount of air, (3) Ash Chamber – where burned fuel is discharge from the reactor after gasification, (4) Fan – which supplies the needed amount of air for gasification, (5) Ash Lever – which discharge burned rice hull after gasification, and (6) Control Switch – which increase or decrease the flame intensity.



Flammable gas, primarily of carbon monoxide, hydrogen, and methane are produced during operation as the burning fuel moves down the reactor. The amount of heat generated during gasification is influenced by the diameter of the reactor, and the time to

operate the gasifier to produce gas is dictated by the length of the reactor. The amount of flame, however, emitted in the burner is regulated with the use of the control switch.

The stove consumes 1 kilogram of rice husk per load. One load of rice husk allows 40 to 50 minutes cooking. Electricity consumption is 0.16 kW-hour. The stove has the following advantage features: (1) Easy to start with almost no smoke at all, (2) Convenient to operate by using a switch knob to control the flame, (3) Clean to operate with no fly ashes, (4) Low cost since it uses rice husk as fuel and minimal amount of electricity, and (5) Affordable.

The investment cost for the stove is P5,000.00 per unit and a savings of P6,026.15 on fuel cost can be operated for one year of operation as compared with the use of LPG stove.



The technology is now being commercialized in the Philippines. Interested organizations to adopt this technology are advised to contact the Project Director, Appropriate Technology Center, Department of Agricultural Engineering and Environmental Management, College of Agriculture Central Philippine University, Iloilo City, Philippines. Telephone number 063-33-3291971 loc 1071, and email ad atbelonio@yahoo.com.

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