A hot water dual purpose improved cook stove- a device to drudgery reduction of rural woman

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ABSTRACT
In the rural kitchen cooking and heating of water for bathe are two major operations performed on the chulha. The time for these operations always overlap in the morning hours. This can delay the cooking operation and require more time to spent in the kitchen for rural women otherwise this can be spent in productive work in agriculture. In Jalgaon district two pot mud cookstove is most common. For the study a two pot modified laxmi chulha was selected. The Laxmi Chulha is a two pot mud cook stove with chimney and can be constructed with clay and some readymade parts such as pottery liner combustion chamber, connecting tunnels, chimney pipe, cowl and metal grate. Special “L” shape device of mild steel is inserted in Laxmi Chulha in order to increase it’s thermal efficiency by absorbing heat lost. Thermal efficiency of a chulha is the ratio of heat actually utilized to the heat theoretically produced by complete combustion of a given quantity of fuel. Special device absorbs the heat lost to the surrounding area, in this way heating the water in special device can increase the heat utilized. It increases the heat utilization and the extra time and fuel wood is saved for heating of water. The efficiency of Laxmi Chulha can be increased by 10 to 12 %. The life of special device is about 8 to 10 years so it’s operating cost and maintenance cost is very low. The main purpose of study was to minimize deforestation by saving the fuel wood. Also the time and money of the rural women can be considerably saved.

Key words: Duel purpose cookstove, Efficiency