



Making Briquettes using Charcoal Fines



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Introduction

Wood-based energy in form of firewood and charcoal is the main source of energy for cooking and heating in Kenya. Increase in population and high cost of alternative energy sources have increased demand for wood-based energy, leading to unsustainable harvesting of trees especially for charcoal production.

To enhance sustainable supply of wood-based energy, briquette making, a technology that depends on wood and agricultural wastes as the primary raw materials was introduced in Kenya. A briquette is a compressed block of combustible biomass material used as fuel.

Materials for making briquettes

- Wood wastes; mainly charcoal fines
- Binder; mainly red clay soil
- Clean water



Charcoal fines



Red soil

Working area

Ensure an appropriate production area is available.

For small and medium sized enterprises (SMEs) in Kenya, a minimum area of about 6 m x 4 m is appropriate.

Procedure for making briquettes from charcoal fines

- Acquire charcoal fines and red clay soil.
- Remove any impurities from the charcoal fines and the soil by hand or sieving.
- Grind coarse charcoal fine by use of pestle and mortar.
- Mix charcoal fines with the red clay soil binder at a ratio of 10:1.
- Add water to the mixture to make a heavy paste which is easy to mould.
- Compress the mixture either by hand or by use of a briquette making machine.

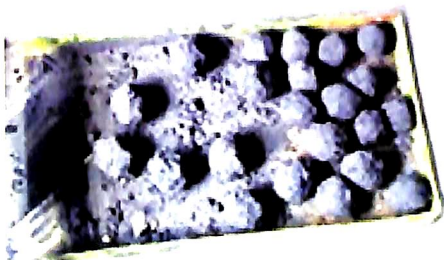
Note: If the briquette moulds break easily upon squeezing, some water should be added.



Compressing briquettes by hand



Electric Briquetting machine



Hand made briquettes



Machine made briquettes

Drying, storing and using briquettes

- Place the wet briquettes in a shaded drying area on the ground or on a drying rack to avoid cracking. Briquettes may take 3-4 days to dry.
- Upon drying, store the briquettes on wooden shelf under shade.
- The briquettes can be sold per piece, or measured in appropriate containers such as; tins, bags or sacks.
- Briquettes can be used whole or broken into smaller pieces, to fit into available cooking stove.



Drying briquettes under shade



Briquettes stored in wooden shelves after drying

Advantages of briquetting

- Reduced pressure on forests as fewer trees are cut for charcoal making
- Diversification of income sources through sale of briquettes
- Employment creation
- Reduced solid waste from charcoal fines
- Cheap and easy to make
- Produces smokeless fire
- Burns for a longer period

This publication was compiled using information collected from Mr. Nelson N. Kenyanya of Kajiado County.

CADEP-SFM documented this information to enhance knowledge sharing in Africa. CADEP-SFM therefore acknowledges all institutions involved in development and promotion of this good practice.

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