

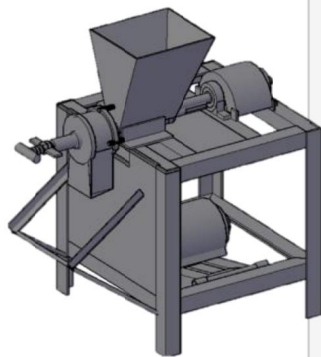
Conversion of coconut biomass into charcoal briquettes can be made easier using the PCA-ZRC – designed briquetting machineries. The machine enables small-scale farmers to acquire alternative source of energy from solid biofuels. Biomass from different coconut parts were collected, turned into charcoal and formed into briquettes to maximize utilization of these farm wastes.

BRICK CHARCOAL KILN WITH SMOKE TRAP

Specifications:
Input capacity: 500 kg split coconut shell
Output: 160 kg (32% charcoal yield)
Dimensions:
Height: 50 inches
Diameter: 56 inches
Carbonization time: 7 hours
Price: PhP 200,000



CHARCOAL GRINDER

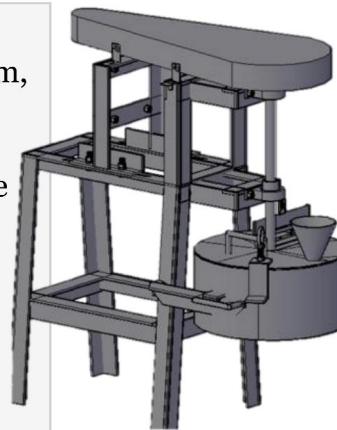


Specifications:
Prime Mover: 2 HP Single Phase Electric Motor 1740 RPM
Particle size/ Fineness: ≤ 1mm
Feeding operation: continuous feeding
Yield: 90% recovery
Rated capacity: 5kgs/hour single pass (70% fine, 30% coarse)
Price: PhP 150,000

CHARCOAL MIXER

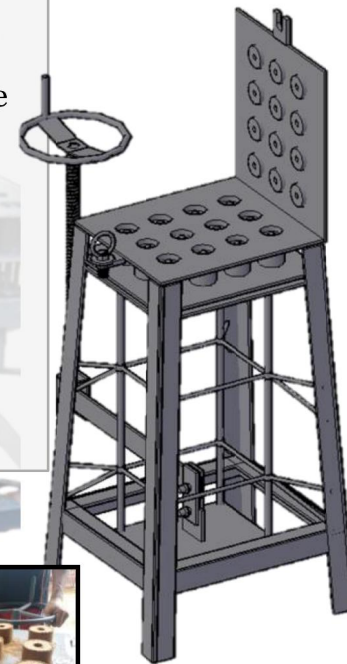


Specifications:
Dimensions: length: 95 cm, width: 42 cm, height: 112 cm
Prime mover: 2 HP Single Phase Electric Motor
Operational speed: 38.2 RPM
Rated Capacity: 8 kgs/batch
Price: PhP 150,000



BRIQUETTING MACHINE

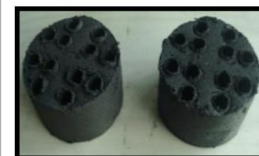
Specifications:
Operation: Manual
Presser type: Screw type
Yield: 12 pcs briquette/batch
Operation time: 3 mins (max.)
Cylinder size: 5 cm diameter, 7 cm depth
Rated capacity: 3 kgs/hour
Price: PhP 150,000



MANUAL BRIQUETTING MACHINE



Specifications:
Diameter of Cylinder: 11cm
Depth of Cylinder: 6cm
Production rate: 4kgs/hour
Price: PhP 5,000



BIOMASS CHARCOAL BRIQUETTE

- Collect the coconut farm wastes
- Carbonize the coconut biomass using ZRC – designed charcoal kiln
- Grind the charcoal using the ZRC-designed Charcoal Grinder into fine particles
- Cook the binder: cassava starch under moderate heat until a syrupy
- Using the PCA-design Charcoal Mixer, evenly mix the charcoal powder and binder
- Form into briquettes using the PCA-design Table-type Briquetting Machine
- Sun-drying



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ZAMBOANGA RESEARCH CENTER
NON-FOOD PRODUCTS DEVELOPMENT DIVISION
San Ramon, Zamboanga City 7000
P.O Box 356

For more information, please contact:
LUISITO J. PEÑAMORA
Division Chief III



(062) 926-7356



pcazrc2018@gmail.com

pcanfpdd@gmail.com

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