



4

## Local Income Solution



ECO-FUEL  
BRIQUETTES



# Deogratus Nsubuga

## SOLUTION ENTREPRENEUR

MALE • 37 YEARS • NAMAYUMBA, UGANDA

Deogratus is a coffee farmer and has grown coffee for seven years. He grew up from a coffee-growing background and eventually started growing it himself. His mother passed away at a young age and later he lost his father when he was in high school. His guardians could not support his school tuition and he did casual work on nearby farms.

Most recently, he joined the Wakiso District Farmers Association (WADFA) as one of the exemplary youth coffee farmers. He got an opportunity to learn different skills in the coffee value chain such as eco-fuel briquettes from coffee husks. The briquettes are an alternative source of cooking fuel and are made from organic waste materials such as banana peelings and dry leaves.

Together with five other youth, Deogratus saved money and started making the briquettes. The briquettes have provided an additional source of income that buys basic needs such as school fees, rent, and medical expenses.

## HIS FAVOURITE QUOTE

“Your mindset determines your success in life.”



### INCOME FACTS

- Startup cost: 70,000 UGX (16.03 Euros)
- Selling price: 8 blocks of briquettes for 1,000 UGX (0.23 Euros)
- Income potential (monthly): 400,000 UGX (91.58 Euros)



### SALE TIPS

- Embrace opportunities in the agricultural sector
- Be willing to influence customers to buy your products
- Be patient in your business



### POTENTIAL CHALLENGES

- Changing the customer's mindsets to buy the briquettes
- May be difficult to transport materials to make the product
- Making many products requires a machine

## 5-YEAR VISION

Owner of eco-fuel briquettes company.



## LEARNING VIDEO

Click the video and learn how to do this income solution.



# 11 Steps TO MAKE ECO-FUEL BRIQUETTES

## MATERIALS

*These materials can make up to 500-700 eco-fuel briquettes*

Coffee husks .....	2 bags
Coffee/dry leaves.....	½ bag
Maize cobs and stems .....	½ bag
Dry banana peelings/potato peelings .....	½ bag
Metallic Drum/retort/kiln/carbonizer.....	1
Water .....	30 litres
Pan/basin.....	2
Stick (to steer).....	1
Cassava flour.....	5 kg
Sieve made of mesh or other material .....	1
Mortar and pestle/ crusher.....	1
Plastic bags.....	1
Mould.....	1
Small stove.....	1
Clay soil or ant hill soil.....	1 bucket



1 Collect and dry all the organic waste such as coffee husks, small branches, cutoffs after trimming coffee, dry leaves and small stems. You may also add maize cobs and stems, banana peelings, potato peelings and other organic waste.<sup>1</sup>



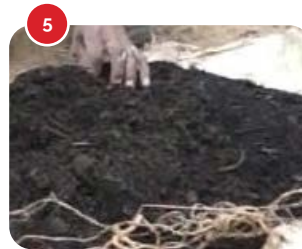
2 Place your drum in a spacious area and start putting the lighter materials like small branches and dry leaves into the drum.



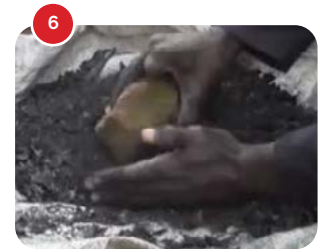
3 Light the dry materials with hot charcoal or a match to start burning the dry organic waste into black char. Keep adding more dry waste like coffee husks, maize cobs and dry banana peelings.<sup>2,3,4,5</sup>



4 After adding all your waste and it has burned into black char, pour little amounts of water into the drum to put out the fire.



5 Get the carbonized material from the drum and put it on clean surface for cooling.



6 Use a stone and crush them until they become fine dust. You can use a sieve made of mesh. The small parts should fall through and the large parts will remain on top. Use the small parts that are sieved.



7 Boil water (25 litres) and place it in a basin. Add cassava flour (5kg) to the water to make it like porridge.<sup>6</sup>



8 Add clay soil into the water and cassava mixture to form a thick paste.<sup>7</sup>



9 Then add your mixture of carbonized material.<sup>8</sup>



10 Smear a little of the cassava solution that was set aside into the mould and place the carbonized material into the mould to form briquettes.<sup>9</sup>



11 After drying in the shade, place the briquettes in direct sunshine for another 1 to 2 days. They are ready for use.

## TIPS

1. Sort materials to remove impurities such as plastics and stones. This makes it easier to light.
2. While burning, ensure that a flame is not created but rather it burns with smoke.
3. Do not use wet organic waste since it will not light up.
4. Place coffee husks, maize cobs, dry banana peelings interchangeably into the drum until it gets full.
5. Turn the materials as they burn to ensure that all the materials has been carbonized.
6. Keep aside about 5 litres of the mixture. It will be used to line the mould to make briquettes come out easily.
7. Stir continuously until everything is mixed evenly. This will make the briquettes heavier and last longer.
8. Knead the solution until it is firm or until you can form balls in your hands.
9. Put the wet briquettes in a dry place without direct sunshine to harden. They can take 3-4 days to harden.