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Local Income Solution



FUEL
SAVING STOVE



John Paul Nkemba

SOLUTION ENTREPRENEUR

MALE • 27 YEARS • KYEBANDO, UGANDA

John Paul uses his creativity and innovation to make fuel saving stoves, a skill he learned from his mother (Prossy) who is considered a leader in constructing eco-fuel saving stoves in Uganda. She was inspired to make them because they produce little smoke, are cost-efficient and energy-saving. In 2004, she developed a civil society organization, Promoters of Efficient Technologies for Sustainable Development (PETSD) with the main aim of empowering vulnerable people in Uganda to learn the skill and generate additional income.

John Paul became passionate about the fuel saving stoves and has been making them for the past seven years to generate additional income. The profits from his business allowed him to pay the tuition for a university degree and also general living expenses.

John Paul aspires to obtain a master's degree in renewable energy with the goal to get more knowledge on making new products in this sector.

HIS FAVOURITE QUOTE

“ *The earth is our mother source, we need to preserve it.* ”



INCOME FACTS

- Startup cost: 70,000 UGX (16.03 Euros)
- Selling price: 1 stove for 15,000 UGX (3.43 Euros)
- Income potential (monthly): 150,000 UGX (34.34 Euros)



SALE TIPS

- Always consider the effect your business has on the environment
- Pay attention to the customer's unique interests and deliver accordingly
- Always think about the future of the business and ensure it remains stable



POTENTIAL CHALLENGES

- Income generated from the stoves may be seasonal
- Many orders may be overwhelming without equipment
- Transport of the stove is challenging due to the weight and clay material.

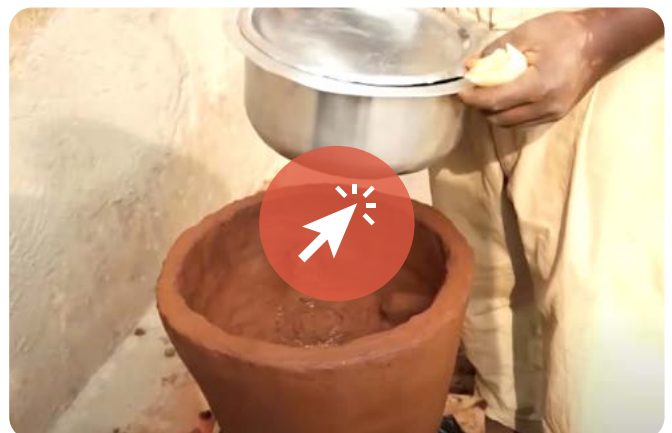
5-YEAR VISION

Produce 1,000 stoves a year.



LEARNING VIDEO

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



20 Steps TO MAKE FUEL SAVING STOVES

MATERIALS

These materials can make up to five fuel stoves.

Saucepan (measuring the size of the stove)	1
Hoe	1
Panga.....	1
Knife.....	1
Spade	1
Wheelbarrow (for carrying soil to the workspace).....	1
Jerry can (for storing water).....	1
Measuring tape.....	1
Plastic bag/basin	1
Banana stem.....	3
Water	40 litres
Clay soil (from an anthill).....	2 bags/6 basins
Dry grass	1 bag
Basket (for measuring the soil).....	1



1 Get clay soil and break it into small pieces. Use clay soil from an anthill.



2 Add the dry grass onto the clay soil. Mix evenly using a hoe.

Note: In every 3 baskets of clay soil, add one basket of dry grass.



3 Pour water over the soil and grass mixture. Use a hoe to mix until it becomes thick.¹



4 Then use your feet to stamp the mixture until it is smooth and moldable.

Note: To check if the soil mixture is ready, we use our hands and add it together. It should be able to stick.



5 We mold the top of the stove basing on the size of a sauce pan. Select a saucepan and measure its inside width in centimeters using a measuring tape. For this example, we used a saucepan that was 21cm wide.²



6 Use half of the measurement from saucepan width (20.5cm) to measure the banana stem width.



7 Use 25cm for the height of the banana stem and then cut it out. You will need two pieces of this height.

Note: The banana stem helps us make the entrance for the firewood and air inlet.



8 Select one piece of the banana stem and cut it into two pieces, one piece being slightly larger (2/3), and another piece being (1/3). The larger piece will create the firewood inlet and the other piece the air inlet. Leave the second stem uncut. This will be the main heating chamber for the stove.



9 On a flat surface, mold a stove base determined by the saucepan size. At the base is where we put our strength because it is the foundation of our stove **Note:** Use recycled polythene bag to lay on the wood before starting to add soil so that it does not stick to the surface.



10 Get the banana stem cuttings for the air inlet (smallest cut part) and for the main stove chamber (uncut banana stem) and place it on the base. Start molding the clay soil mixture around the banana stems.

20 Steps TO MAKE FUEL SAVING STOVES



Put third stem (larger cut stem) on the side of the main stove chamber stem (uncut banana stem). It will act as the fire chamber and the air inlet.



Mold the fire chamber around the stem cutting.



Mold the stove body to the height of the stove fire chamber with space in between it.



Mold the shield on the stove body that helps to protect the fire around the saucepan when cooking.



Seal (at the top) the space in between the fire chamber and the body.



Mold the seating area for the saucepan. This helps give the saucepan a reasonable height above the stove body and to allow proper heating.



Using a scraper to make the stove neat and keep it under a shed (in the shade) to leave it to dry.



Smoothen the seating area for the saucepan and shape three pot holders.



Place your saucepan on the stove to see if it fits. Space should be left between the saucepan and the stove body of 1cm on either side.



After two weeks, remove the banana stems and allow it to dry for 14 days. The stove will be ready for use when it has properly dried depending on the weather or season of the place at that time.

TIPS

1. Add water in small quantities. Too much water will make it slippery.
2. You can use any size of pot but the larger the pot, the larger the stove. Start small and experiment.