

PRODUCT CATALOGUE

JULY, 2021

BIOGAS DIGESTER



SU-re.CO

Sustainability & Resilience



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BACKGROUND

su-re.co's biogas story begins with a mission to make affordable, clean, and green energy available to everyone. Our journey spans countless hours of testing and developing efficient, low-cost and durable biodigesters.

The beauty of our design lies in its simplicity and affordability. We make energy accessible for all, especially those who still rely on traditional energy sources for cooking.

Our focus is to support rural communities to have a better quality of life through the use of our biodigester that provides biogas as a clean cooking fuel as well as bio-slurry as an effective organic fertilizer.





USAGE & BENEFITS

su-re.co biodigester is a biogas reactor designed to convert daily waste of farm animals (manure) or food waste into biogas and bio-slurry. Here are some benefits you can get and impacts you can create for the environment by using our biodigester.

Benefits for Users



Biogas delivered straight to your stove up to 1-2 hour/day



Bio-slurry as organic fertilizer to improve your crop yields



Money savings from the reduced LPG and fertilizer purchase



Cleaner air at home and a healthy living environment

Benefits for the Planet



When used as LPG alternative, one biodigester could avoid the GHG emissions of ~8 Ton CO₂e/year



When used as firewood alternative, one biodigester could avoid the GHG emissions of ~13 Ton CO₂e/year



Waste-to-biogas conversion through anaerobic digestion is a cheap and effective process to treat organic waste

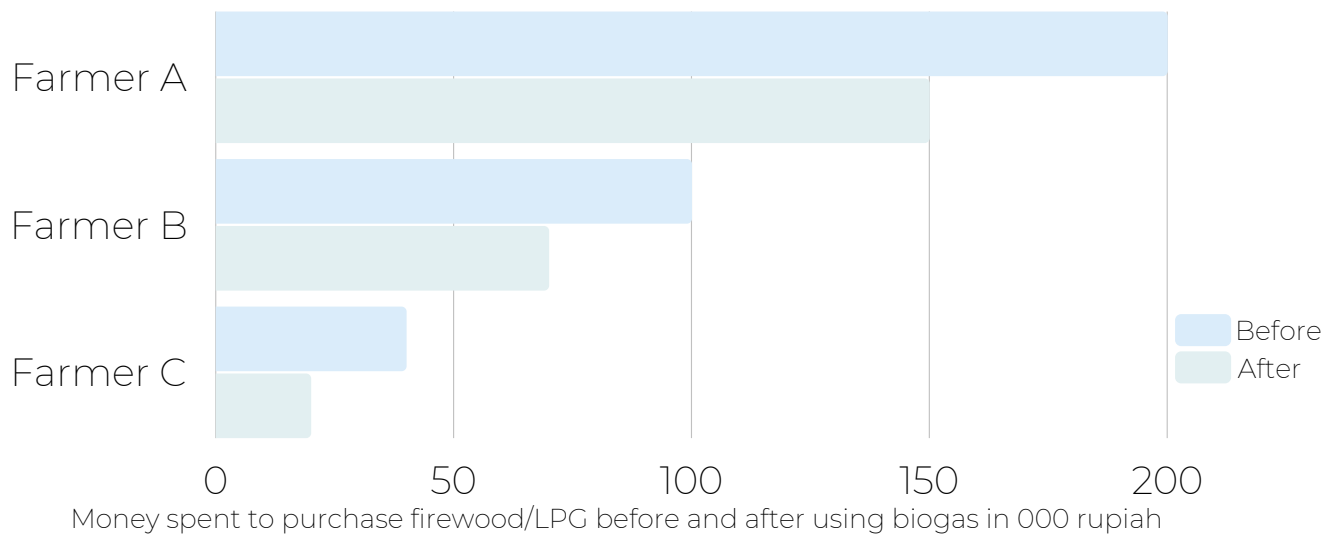


Bio-slurry as organic fertilizer to improve your crop yields

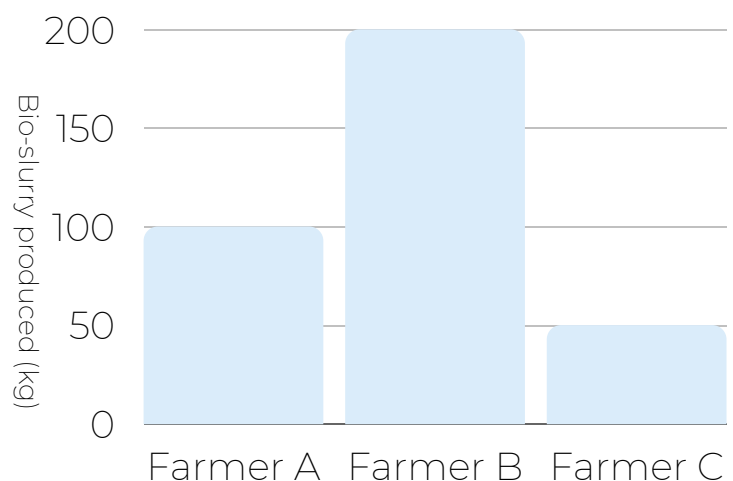


ECONOMIC VALUE

su-re.co biodigester have helped numerous farmers in reducing money and/or time spent on purchasing LPG or firewoods for cooking.



Bio-slurry produced from the biodigester have been used as fertilisers on various plants such as coffee, cocoa, ginger, clove, and nutmeg. Our farmers have also observed improved crop quality.





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CHARACTERISTICS



Easy operation and maintenance

Any family member or worker can perform daily activities and simple long-term maintenance.



Easy installation

Our package consists of components designed for easy installation. You can even do it yourself!



Durable

Our digesters are fabricated with high-quality PVC bags, piping and assemblies offering long lifespan up to 5 years.



Modular

The design allows interconnection among reactors in case you want to increase the system's capacity.



Easily repairable & replaceable

Other than bags, all parts of biodigesters are easily found in your local areas in case a component needs replacement.



Foldable and removable

Our biodigester bags are foldable thus easily transported to remote areas. Plus, as the biodigesters are removable, no land tenure is needed.



REMOTE MONITORING



Remote monitoring by local farmers

We rely on remote monitoring during the pandemic. Our biogas is easy to understand, allowing local farmers to utilise it optimally.



Remote Maintenance

Our biogas are designed to allow easy installation and maintenance. Digesters damaged by natural disaster can be easily repaired through remote monitoring.



Farmers' Innovation

Our straightforward biogas design makes it easy for farmers to fix any problems. Minor issues with our biogas have been solved by farmers' innovation.



Online Training

Despite issues and barriers faced in rural areas, remote training and learning can still be done to guide local farmers.

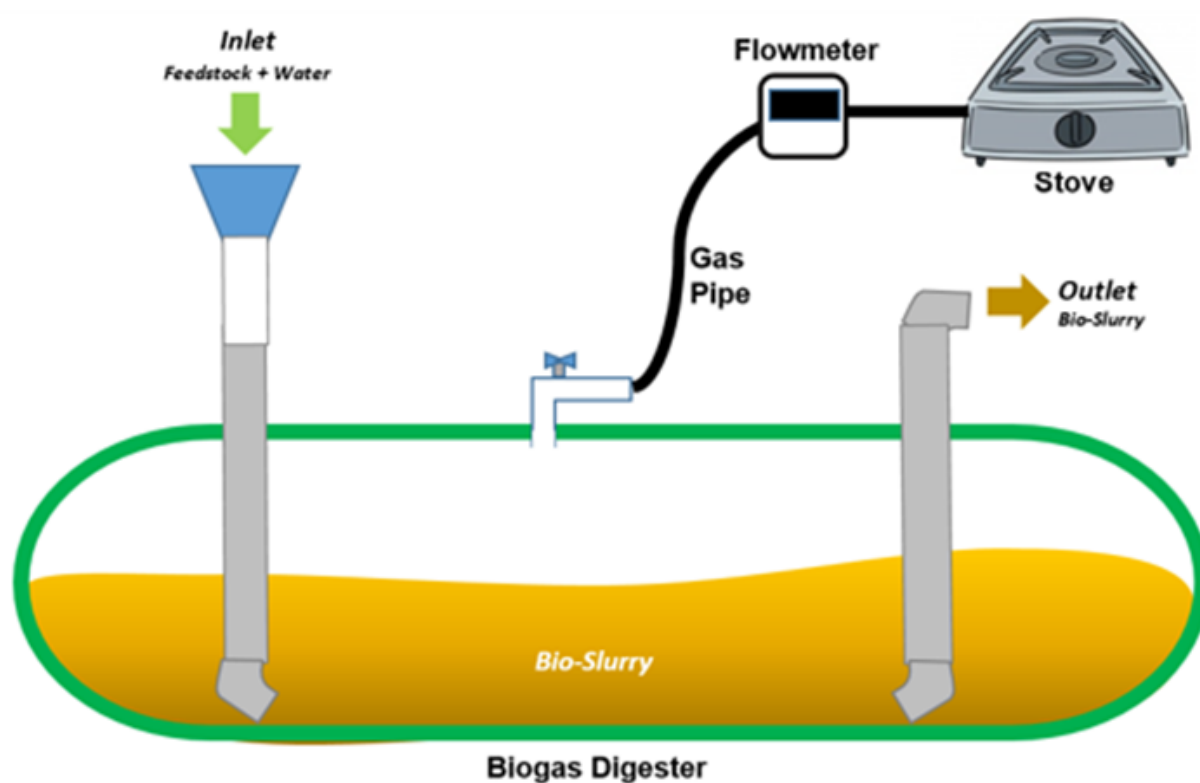


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DESIGN & SPECIFICATION

Type 1 - Top Loading



Volume capacity

0.8 m³

Bag size

0.9 m x 2 m

Energy produced daily

0.73 – 1.15 L LPG equivalent

17.91 – 28.15 MJ

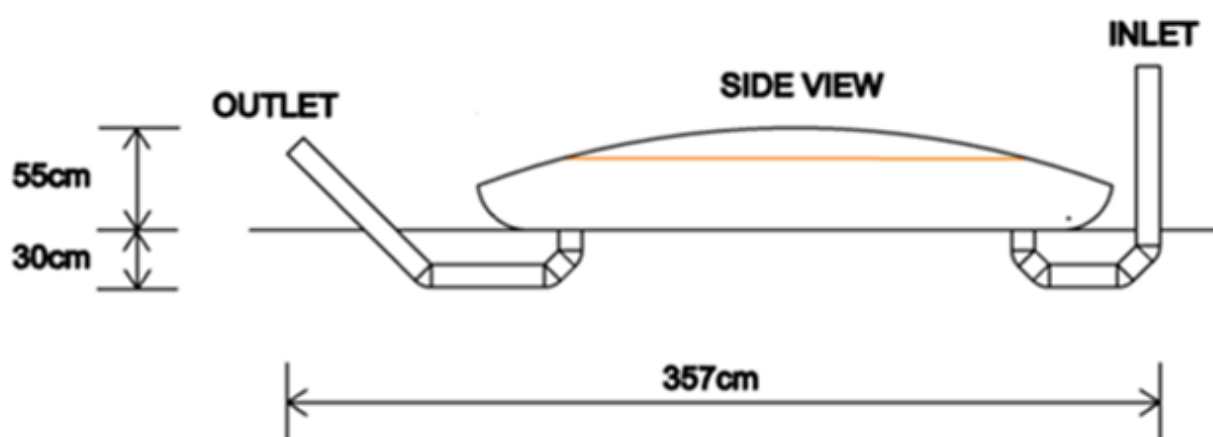


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DESIGN & SPECIFICATION

Type 2 - Bottom Loading



Volume capacity	1 m ³
Bag size	3.6m x 1.2 m
Energy produced daily	0.7 – 1.1 L LPG equivalent 22.54 – 35.42 MJ



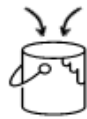
FEEDSTOCK & PROCEDURES

Bacteria starter preparation

1 pack
bacteria
starter*



20
Tablespoon
sugar



5 Liters water

Stir until
homogeneous



*1 pack
bacteria
starter can be
used for 250 L
waste

Bacteria starter is used to help kick off the fermentation process that converts waste to biogas especially when food waste is used as feedstock. But, when manure is used, bacteria starter is not necessary. The use of it will, however, accelerate the process.

Food waste



Collect food waste



Cut food waste to < 5cm



Mix 1:1 with water and
bacteria mix. Mix bacteria
by 1 gram/L feedstock



Stir intensely 1-2 minutes



Pour the mix into inlet
tube

Manure



Collect manure



Mix 1:1 with water and
bacteria mix (optional)



Stir intensely 1-2
minutes



Pour the mix into inlet
tube



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PACKAGES

PRICE

Complete package



Type 1

Type 2



- Bag (1 m³)
- Pipes*
- Stove
- Flowmeter
- Bag Clips

Rp 4,500,000

Bag + stove package



- Bag (1 m³)
- Stove
- Bag Clips

Rp 2,350,000

Gas pipes + stove package



Type 1



Type 2

- Stove
- Pipes

Rp 1,650,000

OTHER COMPONENTS

Flowmeter



Rp 300,000

Bacteria for biogas starter



Rp 50,000/pack @ 250g

Bag Clips



Rp 400,000

*We use generic PVC pipes that are available in the market anywhere thus giving you flexibility in case you want to purchase a package without pipes. All you need is to cut pipes into designated shapes as instructed on the guidelines.



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DOCUMENTATION

Biodigester installation



Installed biodigester (empty)



Blue flame out of biogas



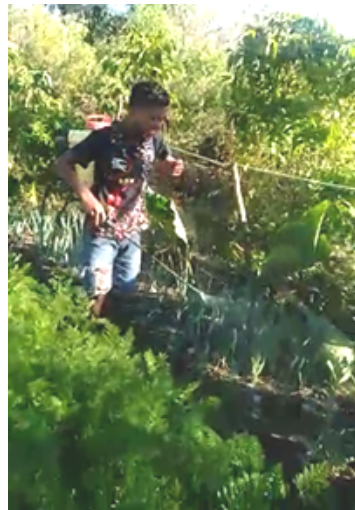
Stove connected to biodigester



**Bio-slurry is being sprayed
on Bajawa farms**

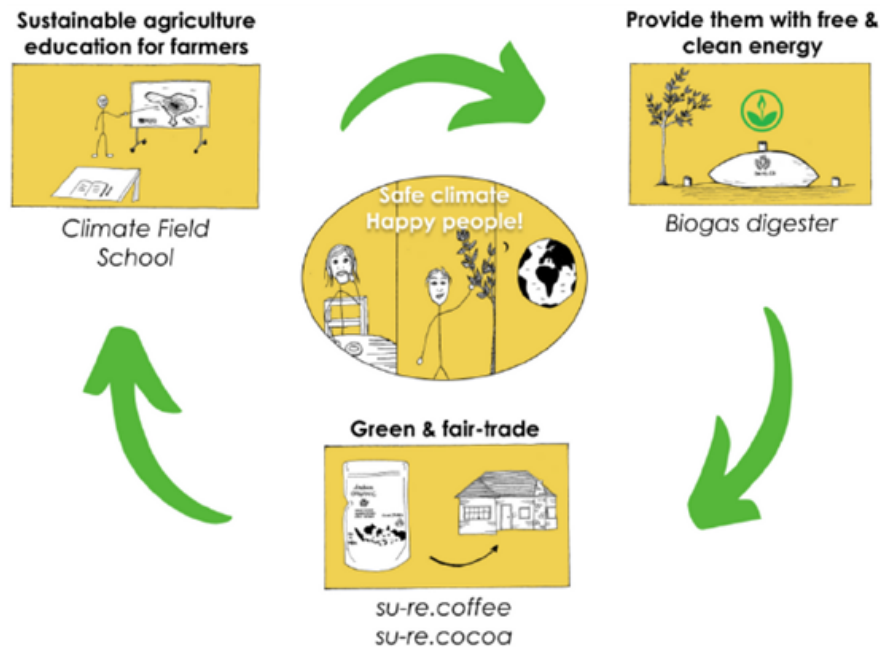


**Bio-slurry is being applied on
scallions**



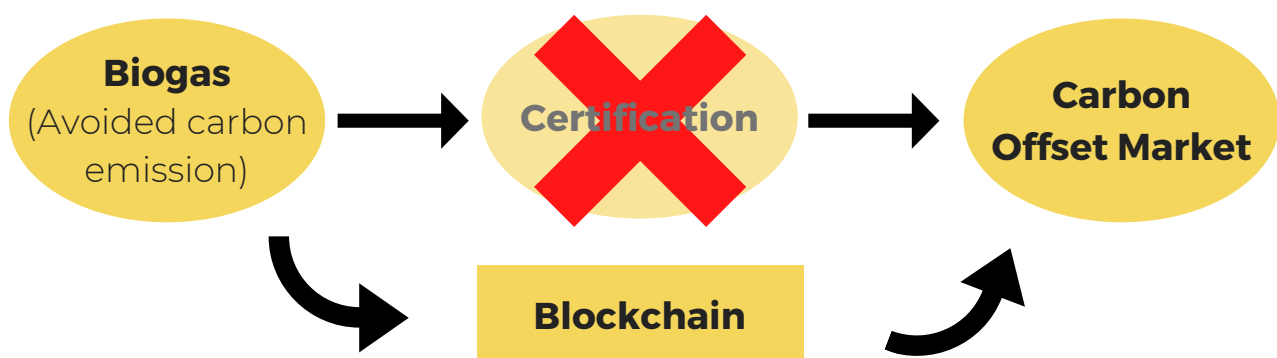


SUSTAINABLE BUSINESS MODEL



Ongoing business innovation

We are currently developing a new biogas business model aimed to improve the sustained use of biogas over long term by maximizing monetary benefits for users. Our idea is to employ blockchain technology to bridge biogas users directly to the carbon offsetting market thus eliminating the need for costly certification and carbon offsetting companies.





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TESTIMONIALS

Let's hear what our clients are saying about our biogas reactors.



"The biogas is useful for cooking as well as lighting our homes."

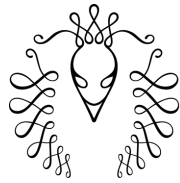
Ketut Windya,
Cocoa Farmer in Jembrana



"The use of bio-slurry has reduced our reliance on chemical fertilizers."

Vitalis,
Farmer in Bajawa





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YOU MAY ORDER THROUGH



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