



SU-re.CO  
Sustainability & Resilience

# BIOGAS DIGESTER

PRODUCT  
CATALOGUE

OCT 2022





**SU-re.CO**  
Sustainability & Resilience



# CONTENTS

- 1 Background
- 2 Usage & Benefits
- 3 Economic Value
- 4 Characteristics
- 5 Remote Monitoring
- 6 Design & Specification
- 7 Feedstocks &  
Procedures
- 8 Options & Prices
- 9 Documentation
- 10 Our Business Model
- 11 Testimonials



# 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, a biodigester could avoid the GHG emissions of ~8 Ton CO<sub>2</sub>e/year



When used as firewood alternative, one biodigester could avoid the GHG emissions of ~13 Ton CO<sub>2</sub>e/year



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

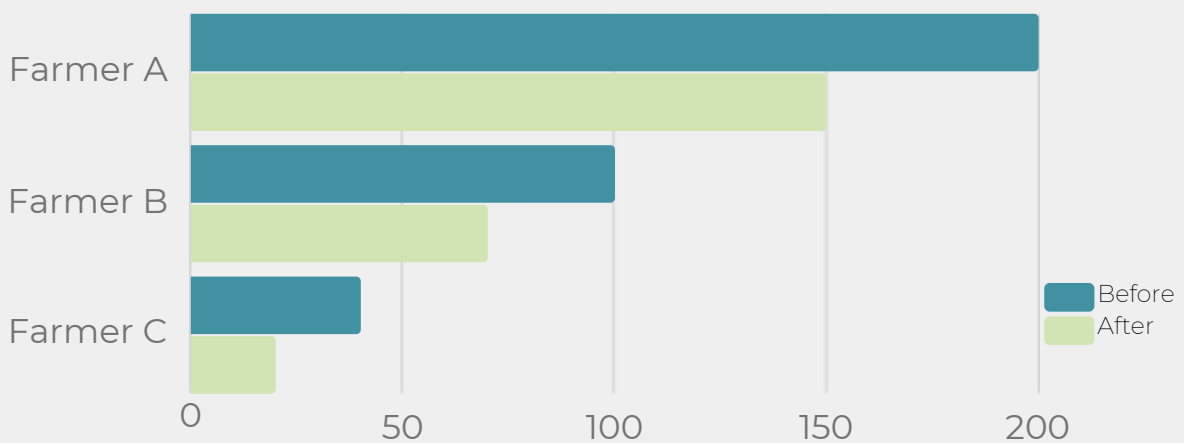


Bio-slurry as organic fertilizer to improve your crop yields



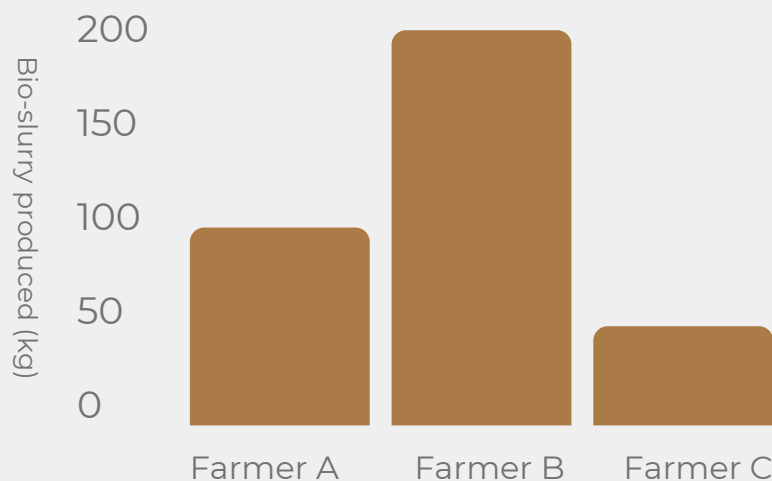
## ECONOMIC VALUE

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



Money spent to purchase firewood/LPG before and after using biogas in 000 rupiah

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.





# 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 a 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 bag, 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.



[info@su-re.co](mailto:info@su-re.co)



[www.su-re.co](http://www.su-re.co)



+ (62) 812 3831 727



# 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.



## 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.



## Remote Maintenance

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



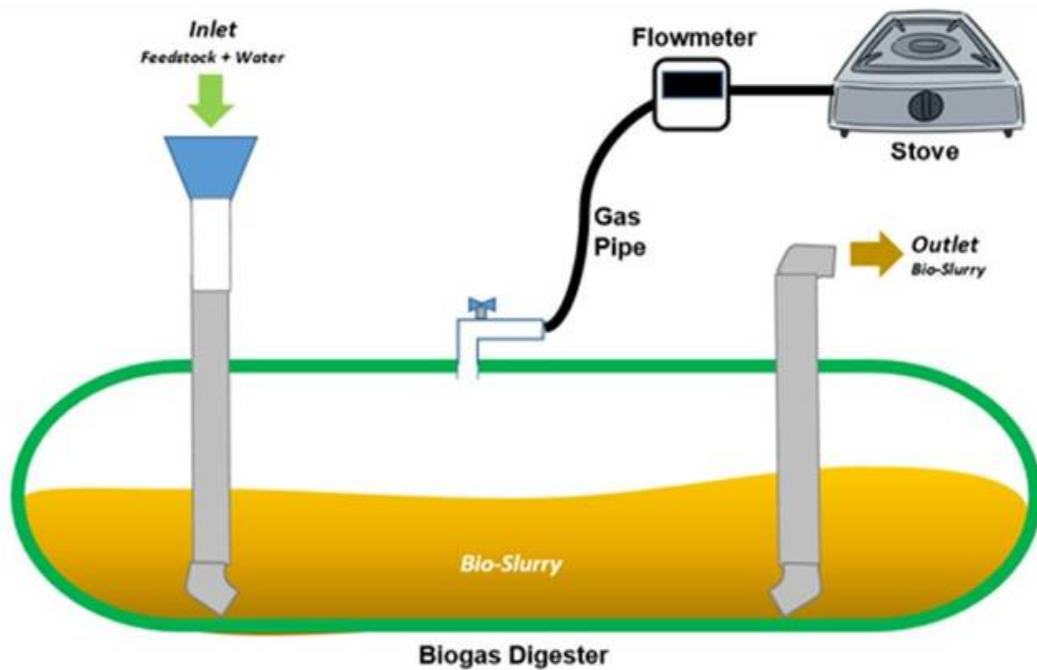
## Online Training

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



# DESIGN & SPECIFICATION

## Type 1 - Top Loading



**Volume capacity**

1 m<sup>3</sup>

**Bag size**

3.6m x 1.2 m

**Energy produced daily**

0.7 – 1.1 L LPG equivalent

22.54 – 35.42 MJ





# DESIGN & SPECIFICATION

## Type 1 - Top Loading



### Ideal Prerequisite of Top Load user:

- Own a land/space with approximately size 3 x 4 meters to install the Biogas Digester
- The user/farmer is interested and committed to filling, using, and maintaining the Biogas on a daily basis.
- Able to manage organic waste (rice, fruit peels, vegetables)
  - 660L food waste + water (ratio 1:1) in day 1
  - 20L food waste + water (ratio 1:1)



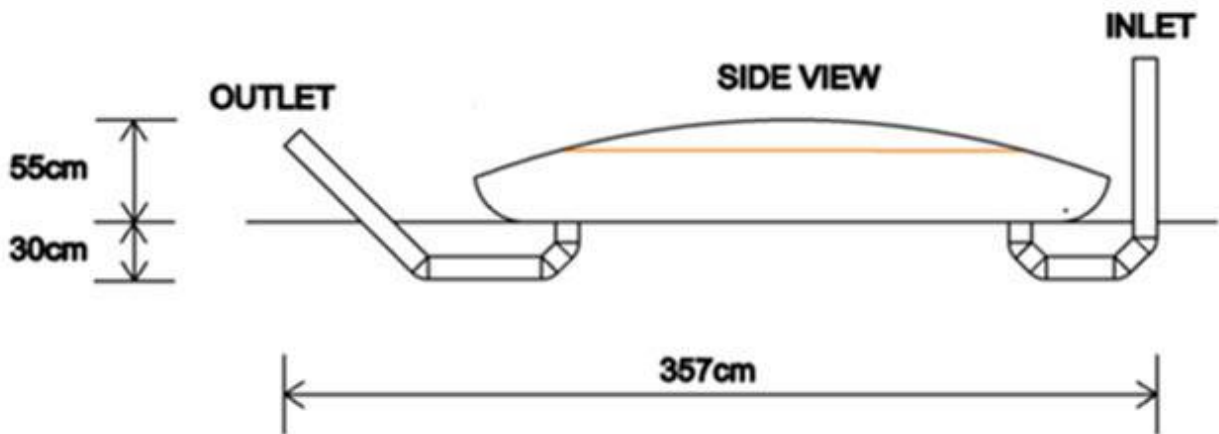
### Ideal Prerequisite of Top Load Location:

- The land can be excavated .
- The temperature of the area is fairly warm location (e.g. below 9°C is not ideal)
- The area is free from trees with fruits that can fall and damage the biogas.
- The area has an access for sunlights
- The distance between Biogas and the stove is around 8 meters
- The installation area has an access to sunlight



# DESIGN & SPECIFICATION

## Type 2 - Bottom Loading



**Volume capacity**

1 m<sup>3</sup>

**Bag size**

3.6m x 1.2 m

**Energy produced daily**

0.7 – 1.1 L LPG equivalent

22.54 – 35.42 MJ



# DESIGN & SPECIFICATION

## Type 2 - Bottom Loading



### Ideal Prerequisites of Bottom Load user:

- Own a land/space with approximately size 3 x 4 meters to install the Biogas Digester
- Have at least 1 pig/cow
- The user/farmer is interested and committed to filling, using, and maintaining the Biogas on a daily basis
- Able to fill the biogas daily with 1 bucket (20L) of pig/cow manure mixed by water with ratio 1:1



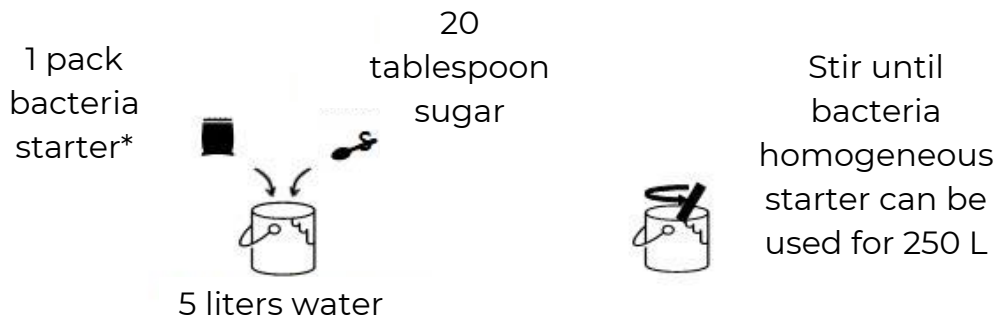
### Ideal Prerequisites of Bottom Load Location:

- The land can be excavated .
- The temperature of the area is fairly warm location (e.g. below 9°C is not ideal)
- The area is free from trees with fruits that can fall and damage the biogas.
- The area has an access for sunlights
- The distance between Biogas and the stove is around 8 meters
- The installation area has an access to sunlight



# FEEDSTOCK & PROCEDURES

## Bacteria starter preparation



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



## PACKAGES

## PRICE

### Complete package



Type 1 or Type 2



- Bag (1 m<sup>3</sup>)
- Pipes\*
- Stove
- Flowmeter
- Bag Clips

**Rp 5,800,000\***

### Bag + stove package



- Bag (1 m<sup>3</sup>)
- Stove
- Bag Clips

**Rp 2,400,000\***

### Gas pipes + stove package



Type 2

- Stove
- Pipes

**Rp 1,250,000\***

\*All prices don't include the installation fee

## OTHER COMPONENTS

### Flowmeter



**Rp 1,100,000**

### Bacteria for biogas starter



**Rp 50,000/pack @ 250g**

### Bag Clips



**Rp 400,000**

\*We use standardized 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 in the guidelines.



SU-re.CO  
Sustainability & Resilience

# DOCUMENTATION

Biodigester installation





SU-re.co  
Sustainability & Resilience



# DOCUMENTATION

Installed biodigester





**SU-re.CO**  
Sustainability & Resilience

# DOCUMENTATION

Biogas stove



“ I received multiple valuable benefits from Biogas. Now, I can regularly use the gas for cooking and received a good quality of fertilizer from the Biogas that I can use for my cacao tree.

**I Kadek Kudana**

Cocoa Farmer in Melaya, Jembrana  
Biogas receiver 2022







# SUSTAINABLE BUSINESS MODEL

**Sustainable agriculture  
education for farmers**



Climate Field  
School

**Provide them with free &  
clean energy**



Biogas digester



**Green & fair-trade**



su-re.coffee  
su-re.cocoa

For us, biogas is not just a technology, but also a big part of achieving a sustainable and resilient community. We also sell our farmers' products in our shop. 15% of our sales goes back to installing more biogas digesters and hosting Climate Field Schools

[SHOP HERE](#)



# TESTIMONIALS

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



If we can turn untreated manure into organic fertilizers, we can solve many problems in our village.

*Fabianus Deru, Head of Fa masa  
Coffee farmer Cooperative in Bajawa*



I am happy that this biogas was successfully installed, and I can use the stove and biogas produced for cooking.

*Paryanto, farmer in Gunung  
Kidul Yogyakarta*

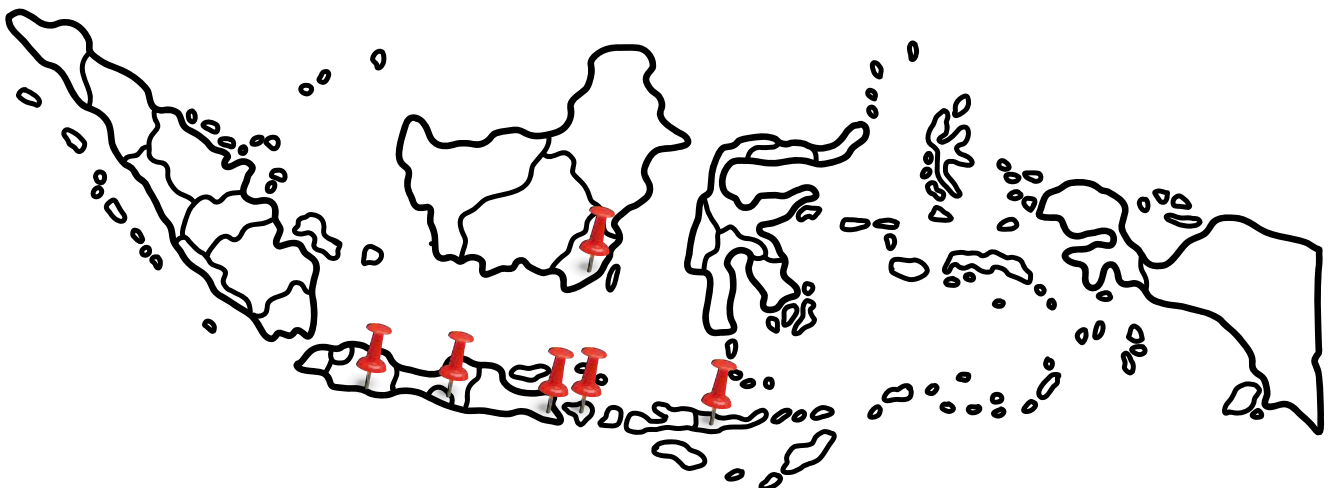


Biogas installation is one of the initiatives to support the ecosystem in the Permaculture Garden.

*Jiwa Garden Community*

84

BIOGAS INSTALLED IN BALI, JAVA ISLAND,  
EAST KALIMANTAN, AND EAST NUSA  
TENGGARA





**SU-re.CO**  
Sustainability & Resilience

# YOU MAY ORDER THROUGH



## Operation Office

Jalan Dalem Gede No.25, Pererenan, Mengwi, Kabupaten Badung, Bali 80351



## Call On

+62 812-3831-727



## Email At

info@su-re.co



## Our Website

www.su-re.co

