SISTEMA.bio

Global Product Catalog

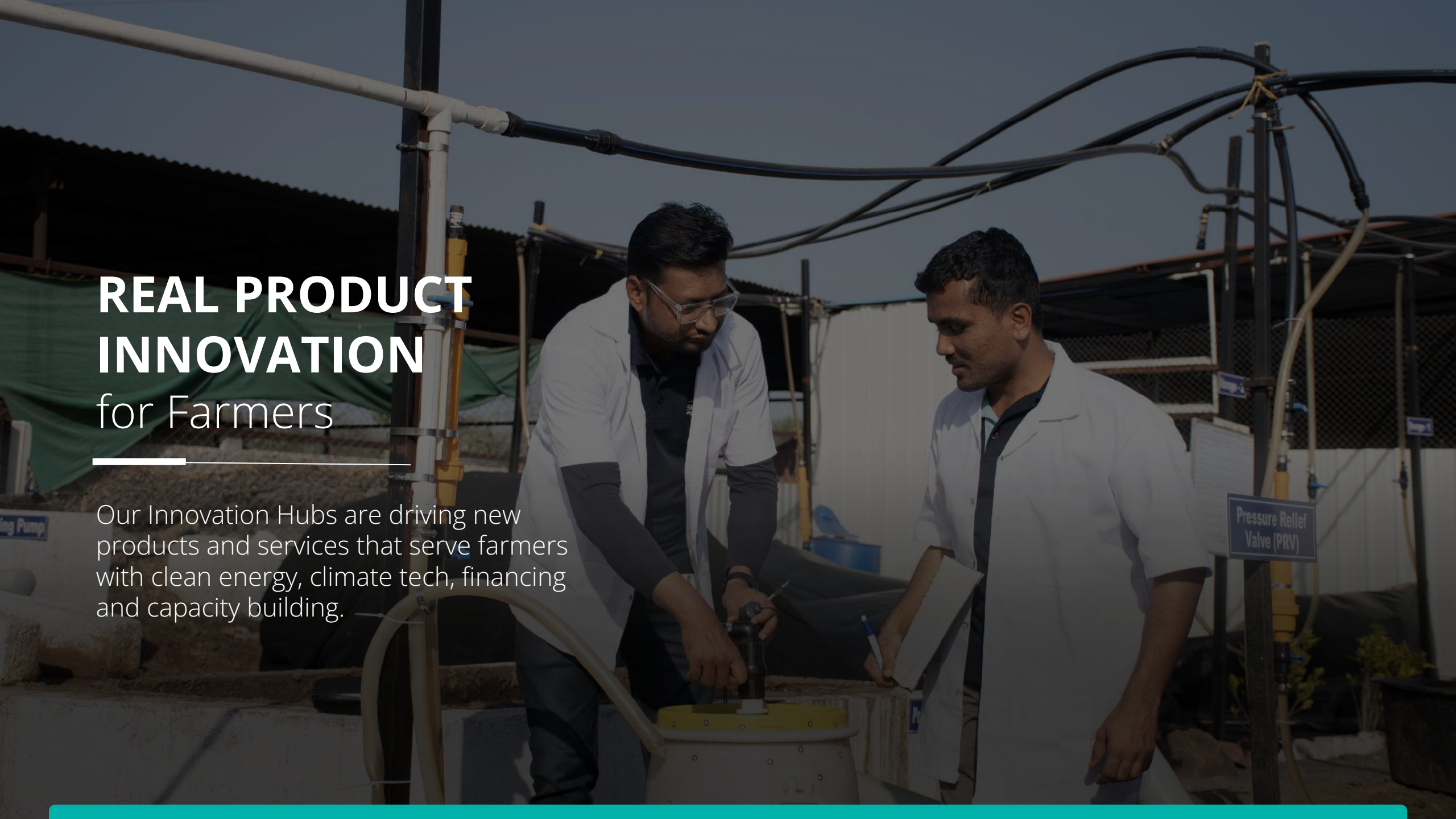
SISTEMA.bio

Overview

At Sistema.bio, we've developed a c**omplete ecosystem of equipment** to meet the diverse waste, energy, and productivity needs of farms around the world. From cooking and heating to water, fertilizer, and electricity, our solutions cover every corner of the farm.

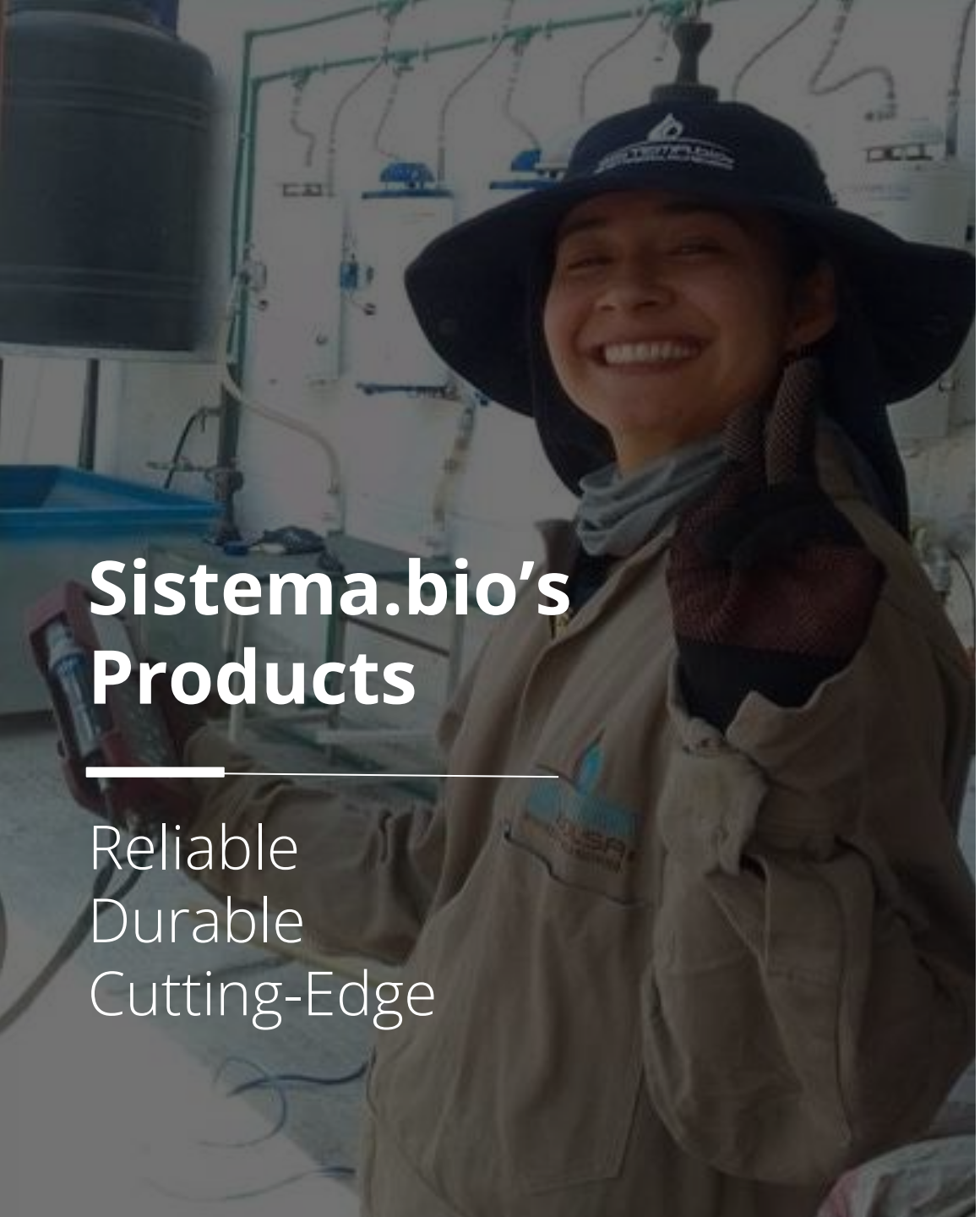
This catalog is built for **carbon program buyers** and designers: whether your goal is to reduce methane, **provide smallholder farmers with infrastructure, decarbonize supply chains or create measurable social impact,** we have the equipment to make it happen.

With modular options for smallholders and large-scale operations, our portfolio allows you to implement impactful projects across geographies, climates, and farm types.



REAL PRODUCT INNOVATION for Farmers

Our Innovation Hubs are driving new products and services that serve farmers with clean energy, climate tech, financing and capacity building.



Sistema.bio's Products

Reliable
Durable
Cutting-Edge

Certified Manufacturing Facilities

We manufacture in our ISO-9001 certified plants in India and México using certified processes, robust planning & inventory systems (SAP-B1 & MRP) to ensure consistent quality in every unit.

High Production Capacity

Our plants have capacity to produce ~100,000 units per year globally, so no matter the scale of your project, we can meet demand.

Dedicated R&D and Innovation Hub

We have a full Research & Development team and a Manufacturing Improvement Team working constantly to refine tech, improve efficiency, increase durability, and adapt to real farm conditions.

Built for Farm Reality

All solutions are developed to withstand rugged farm use, high variation in climate, usage patterns, remote locations. Our innovations are tested out in Mexico, India, and other field sites.

www.sistema.bio

Global Manufacturing Capacity

100,000 units/year

Manufacturing plants in India and Mexico.

130,000 square feet combine

Sistema.bio
Product Range Portfolio

FOR FARMERS

Waste & Clean Energy

Biodigesters
- Single Reactors
- Multi Reactors

Biogas Equipment
- Domestic Cooking Burners & Cookstoves
- Heavy-Duty Burners for Semi-Industrial Food Processing
- Domestic Water Heaters
- Space Heaters for Piglets and Chicks
- Biogas Engine Conversion Kits
- Electricity Generation

Supporting Equipment
- Biogas Boosters & Blowers
- H2S Purifiers
- Extra Biogas Storage

Bioslurry Management
- Bioslurry Pumps
- Other Bioslurry Management Accessories

Agricultural Solutions

Biofertilizers
- All Purpose Biofertilizer
- Vermiwash

Biocontrol
- Organic Biopesticide

Soil Amendments
- Germination Substrate
- Compost Enriched with Bioslurry
- Vermicompost

Biochar

Water Management
- Water Tanks

FOR PARTNERS

Emissions Control & Monitoring

Smart Biogas Monitoring for dMRVs
- Smart Biogas Flow Meters
- Smart Biogas Temperature Sensor

Flaring Solutions
- Automatic Flare

Waste & Clean Energy

Biodigesters

www.sistema.bio

Single Reactors

10 YEAR WARRANTY DIGESTER

Sistema 6
Area Required: 7.8 x 4.0 m
Biogas: 1.7 m3/day*

Sistema 8
Area Required: 8.5 x 4.0 m
Biogas: 2.4 m3/day*

Sistema 12
Area Required: 9.5 x 4.0 m
Biogas: 3.3 m3/day*

Sistema 16
Area Required: 11.5 x 4.0 m
Biogas: 4.8 m3/day*

Sistema 20
Area Required:15.0 x 4.0 m
Biogas: 6.7 m3/day*

Sistema 30
Area Required: 19.0 x 4.0 m
Biogas: 9.6 m3/day*

Sistema 40
Area Required: 23.0 x 7.0 m
Biogas: 13 m3/day*

*Average from cow's waste on a hot climate

Multi Reactors

10 YEAR WARRANTY DIGESTER

Sistema 80
Area Required: Sis 40 x 2
Biogas: 26 m3/day*

Sistema 120
Area Required: Sis 40 X 3
Biogas: 39m3/day*

Sistema 160
Area Required: Sis 40 x 4
Biogas: 52 m3/day*

Sistema 200
Area Required: Sis 40 X 5
Biogas: 65 m3/day*

Sistema 200+

*Average from cow's waste on a hot climate

Waste & Clean Energy

Biogas
Equipment

www.sistema.bio

"My cookstove is so convenient, I got it 5 years ago and still working, it fit perfectly in my kitchen. Now everything is clean without ashes and I can cook a big pot Ugali every day for my and my four children."

Lucy, Kenyan Farmer
Sistema 12

www.sistema.bio

Domestic Cooking Burners
& Cookstoves

Our burners and cookstoves are built to last—robust, reliable, and adaptable to diverse cultural cooking styles, heavy use, and the needs of families worldwide. Designed for long hours and varied cookware.

BioBurner 1

Single burner to be customized by the user

Dimensions: 40 x 9 x 6 cm
Weight: 1 KG

Bio-Stove 2

Double cookstove ideal for Africa and LATAM style cooking

Dimensions: 40 x 9 x 6 cm
Weight: 1 KG

Bio-Stove 3

Double cookstove ideal for Indian style cooking

Dimensions: 40 x 9 x 6 cm
Weight: 1 KG

Household use for smallholder farmers and rural families, replacing traditional wood-fired stoves.

Decentralized energy access, offering a cost-saving alternative to conventional fuels in rural areas.

Livelihood and gender-focused initiatives, improving indoor air quality and reducing time spent collecting firewood.

Supply chain support programs within agricultural networks, improving on-farm living conditions while providing clean energy infrastructure.

www.sistema.bio

Heavy-duty burners for semi-industrial food processing

The BioProBurner Family is built for productivity and impact. Designed to heat 50–500 liters, it delivers reliable, sustainable energy for large-scale cooking and food processing.

Pro Burner 1

Pot Capacity; 50 - 100 L
Dimensions: 8 x 17 x 62 cm
Weight: 3 KG

Pro Burner 2

Pot Capacity: 100 - 250 L
Dimensions: 8 x 19 x 72 cm
Weight: 5 KG

Pro Burner 3

Pot Capacity: 250 - 500 L
Dimensions: 12 x 32 x 83 cm
Weight: 12 KG

Institutional kitchens, such as schools, hospitals, cooperatives or community feeding programs with cooking needs.

Local dairy, meat, and food processing facilities, including milk pasteurization, meat preparation, crop transformation, and artisanal production.

Small agri-food businesses, helping improve profitability through lower fuel costs and enabling decarbonized supply chains.

Thermal energy systems in semi-industrial setups aiming to reduce emissions and integrate sustainable heat sources.

“My business profits have been increased since I started using biogas for pasteurizing the milk. The biogas-proburner is having same cooking ability as my previous LPG burner, so I am saving money now.”

Tere Juarez, Hidalgo Mexico. Cheese Producer
Sistema 80
2 ProBurners used in a 500L tank

Domestic Water Heater

Compact, continuous-flow water heater designed to provide families with instant, reliable hot water while maximizing energy efficiency. Built for households, it combines comfort, safety for hot showers and cooking purposes.

"Key features include **automatic ignition** for ease of use, fire failure protection and overheating protection for **enhanced safety**. Families can count on a steady flow of hot water on demand, ensuring convenience for daily needs such as bathing, cooking, and cleaning"

Enrique Reyes
LATAM Tech Ops Manager and Farmer
Sistema 12 since 2011
Puebla, Mexico

Water Heater 3

Heating Capacity
6 L per minute (4kW)

Biogas Consumption:
1.8 m^3/h

Dimensions:
0.42 m x 0.30 m x 0.17 m

Reliable hot water for daily use, including bathing, cooking, and household cleaning.

Improved comfort, hygiene, and health in smallholder homes by enabling regular access to hot water for bathing, handwashing, and sanitation without relying on firewood or gas cylinders.

Support for family-focused programs, where quality of life improvements are key outcomes.

Livelihood and gender initiatives, easing the burden of manual water heating typically carried by women and children.

www.sistema.bio

Space Heaters for Piglets and Chicks

The BioHeatingLamp provides safe, efficient warmth for piglets and chickens during cold nights, supporting healthy growth and survival. Designed as a sustainable alternative to traditional electric or charcoal systems, it reduces costs while improving animal welfare.

BioHeatingLamp

Average cover area:
1 m^2

Capacity (1 lamp):
150 chicks or 10 piglets

Dimensions:
35 x 30 cm

Newborn piglet and chick heating, reducing mortality rates during critical early-life stages.

Alternative to electric heating, lowering operational costs and dependence on unsustainable energy sources.

Animal welfare programs within sustainable livestock initiatives, enhancing comfort and promoting healthier weight gain.

Supply chain resilience strategies, helping producers meet higher animal care standards in pork and poultry value chains.

Biogas Engine **Conversion Kits**

The Engine Adaptation Kit allows gasoline engines to run on biogas, reducing daily fuel expenses and enabling cleaner energy use on the farm. Compatible with a wide range of engines, the kit maintains dual-fuel functionality, allowing the engine to operate on either biogas or gasoline when needed.

Engine Adaptation Kit - Small

Average biogas consumption: 2.5 m^3/h

Applied to engine size: 6.5, 7 Hp

Engine Adaptation Kit - Large

Average biogas consumption: 3-3.5 m^3/h

Applied to engine size: 9, 13, 15 Hp

Farm productivity programs, where biogas-powered engines drive essential equipment such as milking machines, grain mills, chaff cutters, and crop shredders.

Climate-smart agriculture projects, promoting clean energy use in productive systems as a key step toward low-emission rural development.

Supply chain decarbonization initiatives, enabling producers to lower fuel costs while building a more resilient and sustainable supplier base.

Livelihood and cost-reduction programs, supporting farmers with tools that cut daily fuel expenses and increase operational resilience.

Electricity Generation

Designed to work 100% on biogas generated from Sistema.bio's digester. Our biogas-powered generators provide reliable off-grid electricity for essential farm operations, powering lights, fans, water pumps, slurry pumps, milk chillers, and more.

Biogas Generator
7.5 KVA

Coming soon

Adapted diesel generator
5 KVA

Coming soon

Energy access programs, bringing off-grid electricity to farms and rural communities where power infrastructure is limited or unstable.

Supply chain strengthening, enabling producers to improve cold chain, irrigation, and mechanization through clean and cost-effective power.

Resilience and livelihood initiatives, helping farmers reduce reliance on diesel while powering key equipment for productivity and quality of life.

Carbon and renewable energy programs, replacing fossil fuels with biogas derived from on-farm waste, directly reducing emissions and enabling measurable climate impact.

Supporting Equipment

H2S Purifiers

The H_2S Purifier Family ranges from simple filters to micro-aerators, extending the lifespan of all metallic gas appliances by reducing hydrogen sulfide levels through advanced filtering media.

Biogas Filter-5

Inline filtration

Installed for Digesters: S6-S20

Filtering Media Replacement:
Site dependant (Average: yearly)

Biogas Filter-20

Inline filtration

Installed for Digesters: S30-S40

Filtering Media Replacement:
Site dependant (Average: yearly)

Biogas Filter-60

Inline filtration

Installed for Digesters: S30-S40

Filtering Media Replacement:
Site dependant (Average: yearly)

Micro Aerator

Internal H2S reduction via periodic air injection in the biodigester

Electric Consumption: 3 watts when operating

Installed for Digesters: S30-S40 and for sites with very high H2S.

Biogas Boosters & Blowers

Biogas Boosters & Blowers are designed to enhance the flow, reach, and reliability of biogas across different farm applications. These components help move gas efficiently from the digester to points of use, even over long distances or in systems with variable pressure needs.

Biogas Booster Pump 15 W

Power supply: 15 W

Max. Flow rate: 1.8 m^3/h

Max. Pressure increase: 250 mbar

Biogas Turbine GF-120

Power supply: 120 W

Max. Flow rate: 14 m^3/h

Max. Pressure increase: 60 mbar

Extra Biogas Storage

Our extra biogas storage solutions provide flexible, high-capacity storage for biogas generated by biodigesters. Designed to manage production peaks and consumption gaps, these systems help ensure continuous energy availability across farm operations.

BioBalloon

3 m³

4 m³

5 m³

Waste & Clean Energy

Bioslurry Solutions

www.sistema.bio

Bioslurry Pumps

www.sistema.bio

Designed to move nutrient-rich bioslurry efficiently from digesters or storage tanks to fields or secondary treatment systems. Whether submersible or external, these pumps help manage slurry productively across a variety of terrains and distances, reducing labor and enabling better application.

These solutions close the loop between waste and productivity by transforming bioslurry into an asset that boosts yields and reduces environmental impact.

Bioslurry Pump 2HP

Max. Head: 14 m @ 230 L/min

Min Head: 2 m @ 800 L/min

Mixing Pump 3HP

Max. Head: 15 m @ 100 L/min

Min Head: 2 m @ 500 L/min

Bioslurry Pump 0.5 HP

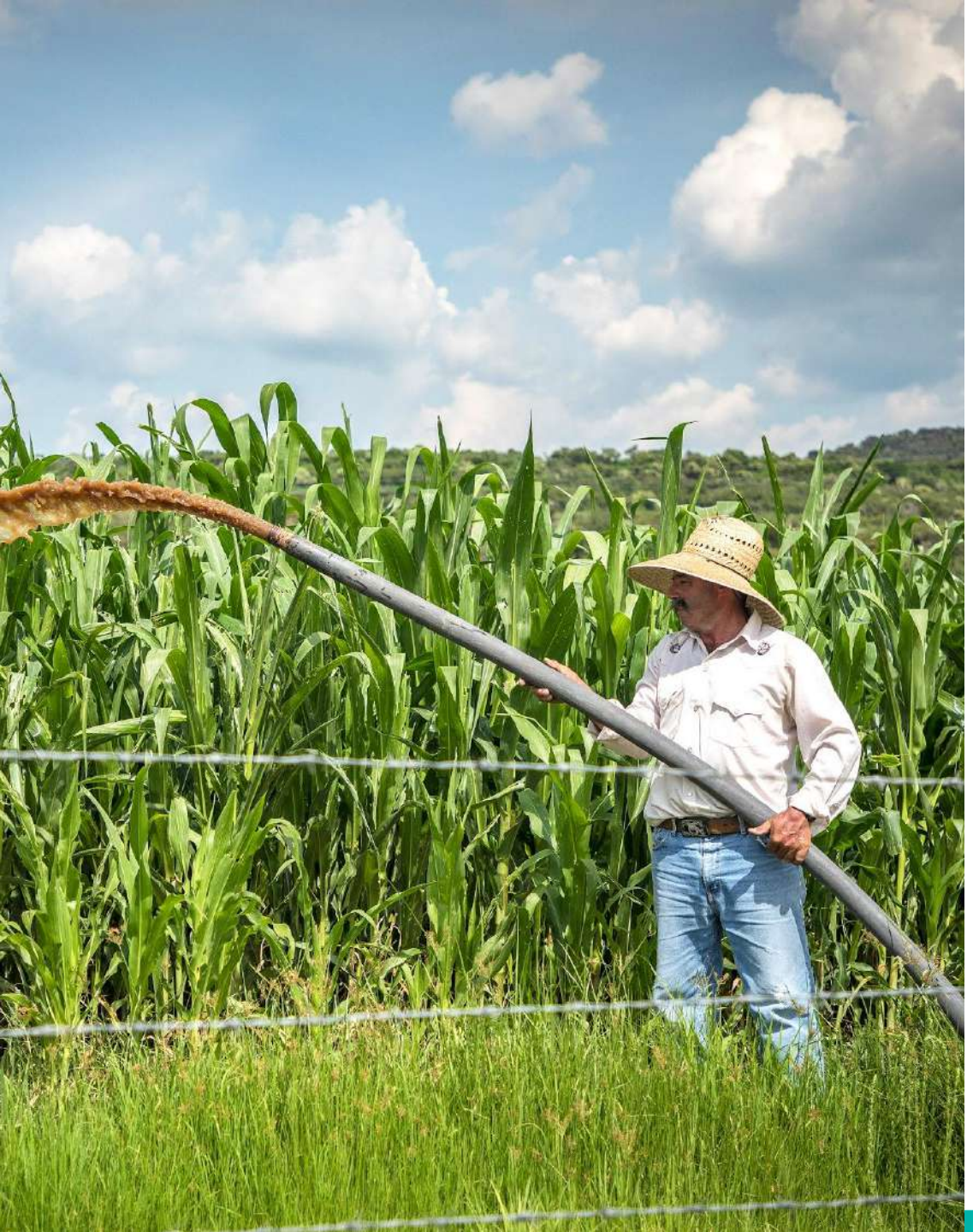
For filtered bioslurry

Comes with bioslurry filter

Regenerative agriculture programs, enabling efficient distribution of organic fertilizers and improving soil health through better nutrient application.

Smallholder infrastructure initiatives, providing farmers with the tools to manage slurry without manual labor.

Sustainable input access programs, helping producers integrate circular, low-cost fertilization practices into their operations.



Other Bioslurry
Management Accessories

Specialized tools that enhance the handling, treatment, and application of bioslurry on the farm. From manure mixers that homogenize inputs before digestion, to filters that improve slurry quality, to containers that support vermicomposting, each component plays a role in maximizing the agronomic value of organic waste.

Manure Hand Mixer

Bioslurry Filter

Vermicompost

Agricultural Solutions

www.sistema.bio

Biofertilizers

Our Biofertilizers are regenerative agricultural inputs derived from bioslurry and enhanced with various processes and ingredients boost plant growth and soil health. Designed for various crops and farming systems, these products improve nutrient availability, water retention, and overall soil fertility without relying on synthetic inputs.

Produced locally and tailored for impact, our biofertilizers support productive, low-emission agriculture and align with circular economy principles on the farm.

Biol Pro

All Purpose Biofertilizer

For Comprehensive crop development
Contains enhanced Biol, Beneficial microorganisms, and Amino acids and natural extracts

Biol Lex

Vermiwash

For enhancing growth during crop development
Contains Humic and fulvic acids

Biopesticides

Natural, effective alternative to chemical pesticides, Biol Guard helps farmers protect their crops while preserving soil life, and ecosystem balance. Formulated from plant-based and microbial ingredients, these solutions prevent pests and diseases without leaving toxic residues.

Ideal for both smallholders and commercial farms, biopesticides are a key component in transitioning toward low-impact, regenerative production systems.

Biol Guard

Organic
Biopesticide

For pest and/or disease prevention

Contains Beneficial microorganisms
Natural extracts

Soil **Amendments**

Our Soil Amendments are designed to restore soil vitality, improve root development, and support healthy crop establishment. These inputs offer a natural, farm-ready solution to boost productivity while regenerating soil health.

Biol Seed

Germination Substrate

For preparation of germination trays
Contains:
Enhanced bioslurry, worm humus, compost, organic carbon, and coconut fiber

Biol Hum

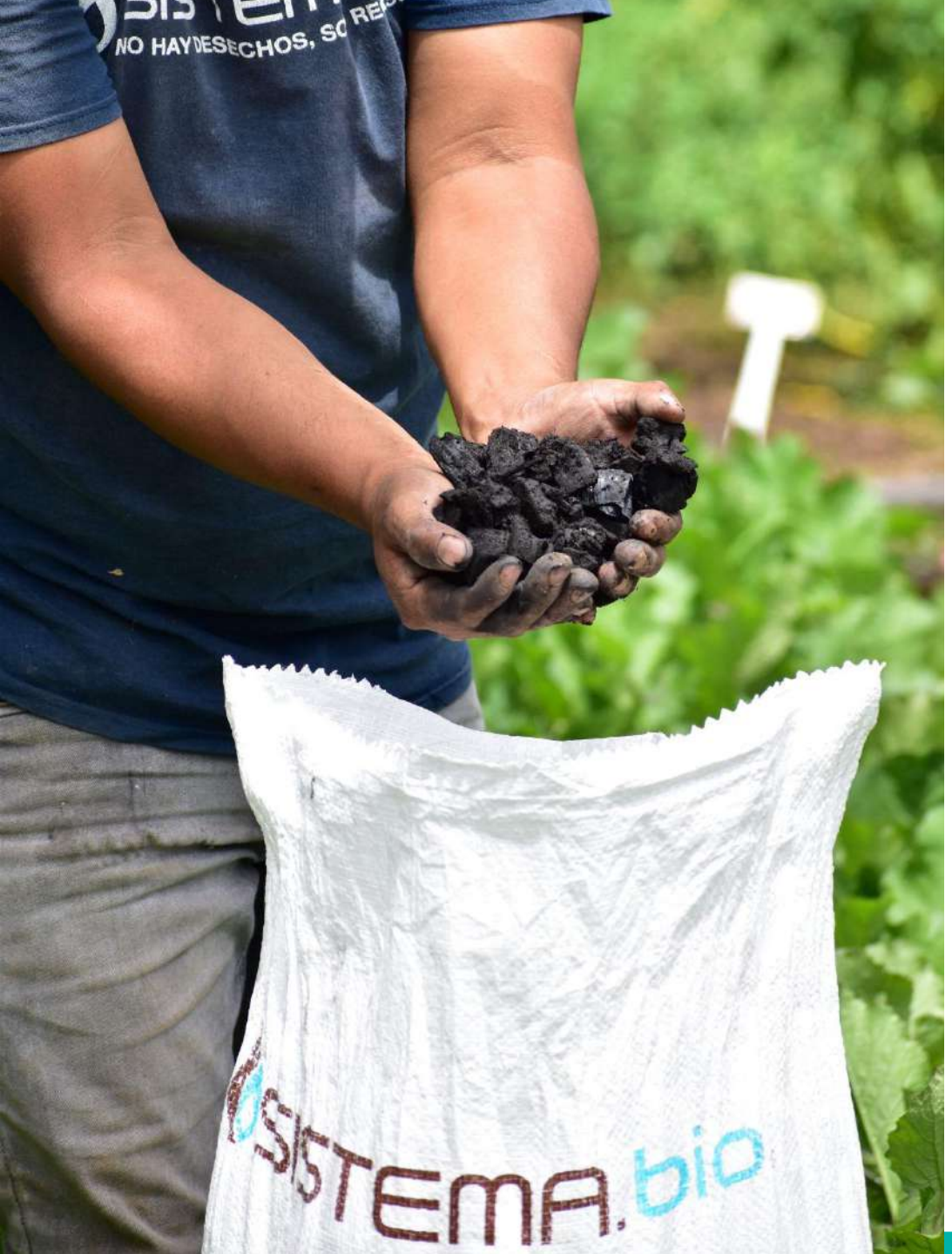
Vermicompost

For correction of nutritional deficiencies
Contains:
Worm humus and enhanced bioslurry

Biol Earth

Enriched compost

For bed preparation, base fertilization, and soil structure improvement
Contains:
Compost with enhanced bioslurry



Biochar

Carbon-rich soil amendment that improves nutrient retention, water holding capacity, and microbial life. Unlike other inputs, it permanently stores carbon in the soil, making it a high-impact solution for both soil regeneration and carbon offset projects.

Due to its unique role in long-term carbon sequestration, biochar stands as a distinct category within our regenerative product ecosystem that also serves as a key ingredient in some of our other agricultural inputs.

Water Tanks

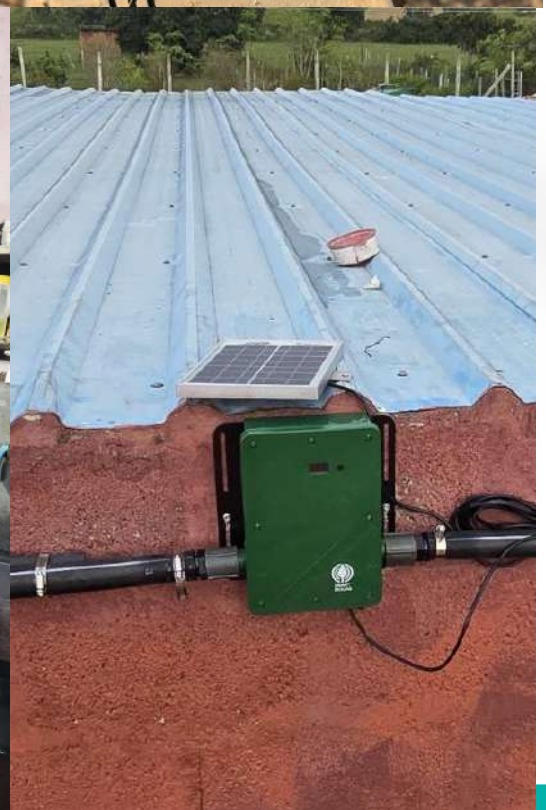
The BioWaterTank 2.0 is designed to optimally store and contain water. Its structural configuration allows it to be placed directly above ground, and its design includes an internal support that distributes weight evenly, ensuring stability and shape retention during continuous filling and emptying cycles.

Model	**BioWaterTank-08**	**BioWaterTank-20**	**BioWaterTank-40**
Capacity	8 m3	20 m3	40 m3
Dimensions (m)	3.45 x 2.3 x 1.0	8.4 x 2.3 x 1.0	16.4 x 2.3 x 1.0
Material		LLDPE	

Emissions Control & Monitoring

Smart Biogas Meters
for dMRV

www.sistema.bio



www.sistema.bio

Smart Biogas Meters
dMRV

The Smart Biogas Raw Meter collects pressure, flow and gas consumption data from biodigesters and feeds it back to a software platform. Advanced analytics within the platform enable biogas owners and technicians to collaborate effectively, ensuring digesters operate at peak performance.

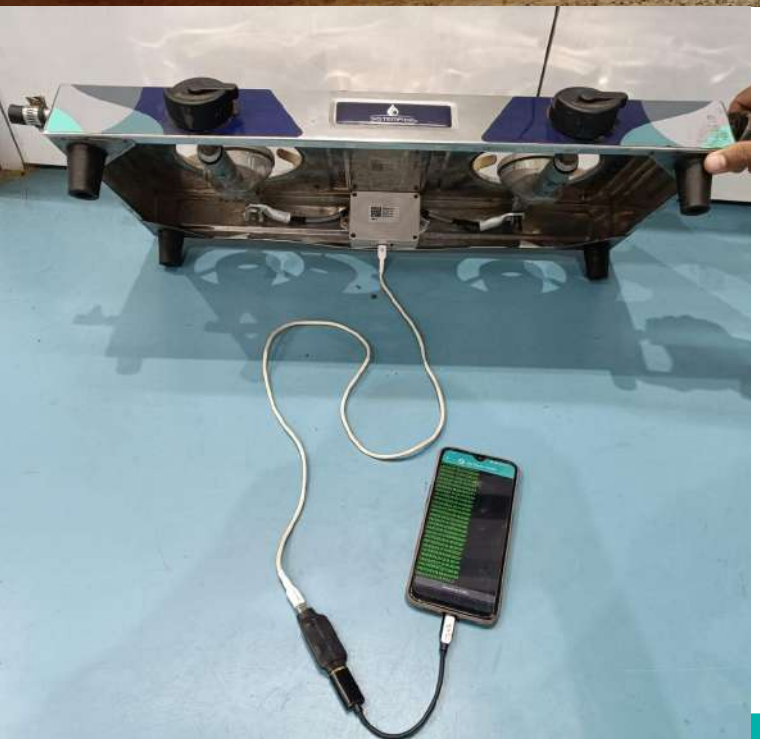
The precise sensing and real-time monitoring solutions make SB Meters a reliable and transparent dMVR tool for carbon reporting, fully aligned with the stringent requirements of high-integrity carbon programs.

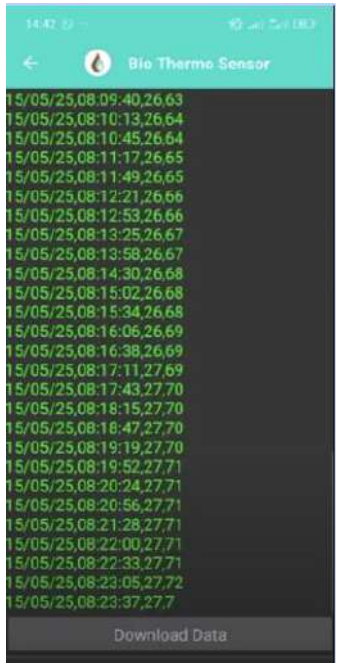
Smart Biogas Meter Raw

Communications & Security

- 2G + 4G
- TLS1.2

Low Pressure Range	Max Pressure Rating (mbar)	Min Flow (m3/h)	Max Flow (m3/h)	Accuracy ±FSS
Smart Biogas Meter Raw 7	100	0.29	6.7	1.5%
Smart Biogas Meter Raw 36	100	1.41	36	1.5%
Smart Biogas Meter Raw 53	5000	3.5	53	1.5%





Smart Biogas
Temperature Sensor

The Smart Biogas Temperature Sensor is a device fitted to the cooking stove to monitor the stove usage time and its correlation with biogas consumption by collecting the temperature data of each stove burner. the Encrypted/temper-proof data can be collected and uploaded to the cloud for analysis and tracking anywhere around the globe.

Smart Biogas Temperature Sensor

Monitoring cooking point	2
Data Storage capacity	5 years
Data Analysis App/Web	Cloud Based
Accuracy	± 5%

Emissions Control & Monitoring

Flaring Solutions

www.sistema.bio

Flaring Solutions

Designed to safely destroy excess biogas, ensuring that methane, a super-pollutant with over 28 times the warming potential of CO_2 over a 100-year span, is never released into the atmosphere.

By capturing and combusting unused gas, these systems secure the environmental integrity of carbon programs, enabling measurable, high-integrity emission reductions.

They are a key component in climate mitigation strategies where transparency and methane control are non-negotiable.

Ignition mode	Automatic via pressure control
Max. number of digester per flare	5
Max biogas combustion	8 m^3/h
Methane conversion efficiency	99.50%
Electricity power consumption	10 W

www.sistema.bio

Sistema.bio | Sistema Biobolsa