



Kankyo Bert Pvt Ltd



Kankyo Bert

German Technology • Indian Engineering

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About Us

- Design Engineering
- Project Management
- Technology Optimisation
- Turnkey Projects
- Operation & Maintenance
- Training
- Research & Development



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About Us



Thomas Dory, President

Thomas comes with a rich four decades of experience in management and engineering. Developed successful farm scale biogas plant in Europe with the patented PON Mixing technology. With a strong business acumen, he spearheads many successful biogas projects around the globe.



Dev Anand, Managing Director

Dev is a mechanical engineer with masters in environmental management and international business. Comes with a 3 decades of experience in the field of waste management, waste to energy, water and wastewater treatment, bioremediation and air pollution control. Indigenously developed key technologies in these segments which are implemented successfully in many projects.

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Our Board



Sriram Chellappa, Director- TQM, Dev Anand, Managing Director,
Thomas Dory - President, Balaji Gurusamy, Director - Projects

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Our Team

Kankyo Bert has three decades of experience in biogas management starting from Concept to commission. Backed by a strong team of experienced professionals it offers pre-engineered and customised biogas solutions for a range of applications.



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Global Franchise Partners



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Why Kankyo Bert

Our Vision

Be a leading driver for a commercially viable biogas solutions globally

Our Mission

Our Mission to strive hard to achieve what has not been achieved hitherto and produce the world's best products & services in terms of quality, reliability and performance to serve the domain of biogas and translate our advanced technologies into value for our customers and stakeholders.

OUR EXPERIENCE – YOUR ADVANTAGE

- ✓ Standard & individual solutions
- ✓ Innovative ideas & mature concepts
- ✓ Efficient processes & many years of experience
- ✓ Transparency & know-how in implementation
- ✓ Cost efficiency through a lean organization
- ✓ Social impact through local value creation

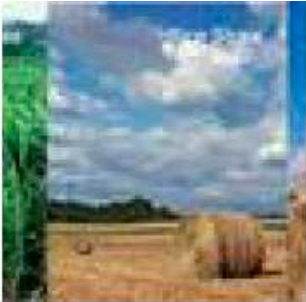
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Technology Spectrum



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Our Solutions



- Containerised Plug flow digester
- Cavitation technology
- PON Mixing technology
- Semi aerobic hydrolysis
- Enzymatic hydrolysis
- Digestate treatment
- Nutrient recovery
- CCHP integration
- Protein feed from Digestate



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Kankyo Bert Mobil



- Plug and play type
- PON Mixing ensures complete mixing
- Unique 3 level blade mixing for scum breaking and first level mixing
- External wall heating with insulation
- Higher gas production
- Low foot print
- Modular

Range starts from 1 TPD to 10 TPD

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Cavitation Technology



BioBANG® is a controlled cavitation patented technology, designed to improve the features of any biogas or biomethane plant. BioBANG® breaks up, liquefies and permanently homogenizes all types of biomass, even low-cost types, resulting in them instant digestion.

BioBANG® allows to:

- Increase production of biogas and biomethane, reducing the biomass' amount that must be loaded every day;
- Improve energy conservation offered by the mixing because it drastically reduces the biomass viscosity;
- Increase the fibers digestibility, even low-cost types, and reduces the retention times of biomass.



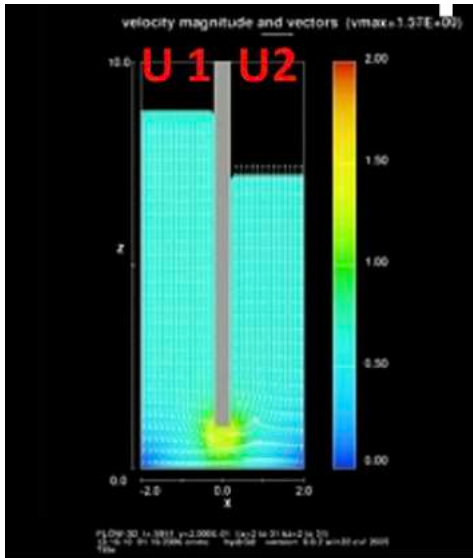
Original state

Vs



Treated with BioBANG

PON Mixing



The Power Of Nature (PON technology) is used to mix the substrates in the digester. These natural forces help saving on operational cost and investment. It allows to build small plants. No other biogas system is using the PON mixing. Thus PON is a unique technology which is optimized for liquid fermentation and small plants. Our technology was designed to use minimal moving parts and allows operation with minimal amount of time (15-30 minutes per day). This concept reduces maintenance cost.

The construction design of the concrete digester allows the generated biogas to mix the substrates. This happens automatically and continuously. We call it the „Schwip-Schwap“ technology.

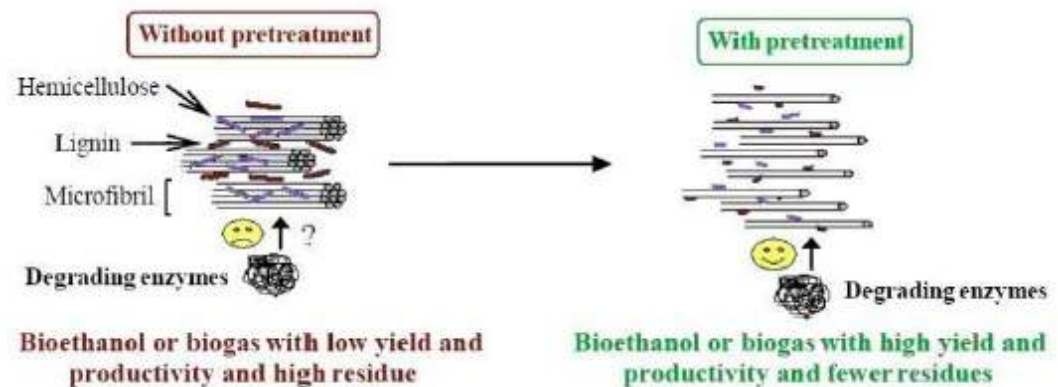


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Hydrolysis Pre-treatment

Our hydrolysis unit provides anaerobic and anaerobic mixed flora with different biochemical reactions:

- ❖ Support aerobic microorganisms to rapidly secrete large amounts of hydrolase to convert cellulose into soluble sugar
- ❖ Support anaerobic microorganisms to produce small amounts of alcohol
- ❖ Support aerobic production of acetic acid
- ❖ Supports the internal disintegration of molecular chains and reduces material viscosity while rapid polymer degradation



Containerised BioCNG



Our Plug and play type containerised type BioCNG plants starts from 3 TPD onwards upto 10 TPD, which are modular in nature. This will facilitate decentralised organic wet waste management. BioCNG produced can be sold to restaurants , hotels nearby or used as transportation fuel for their own fleet of vehicles.



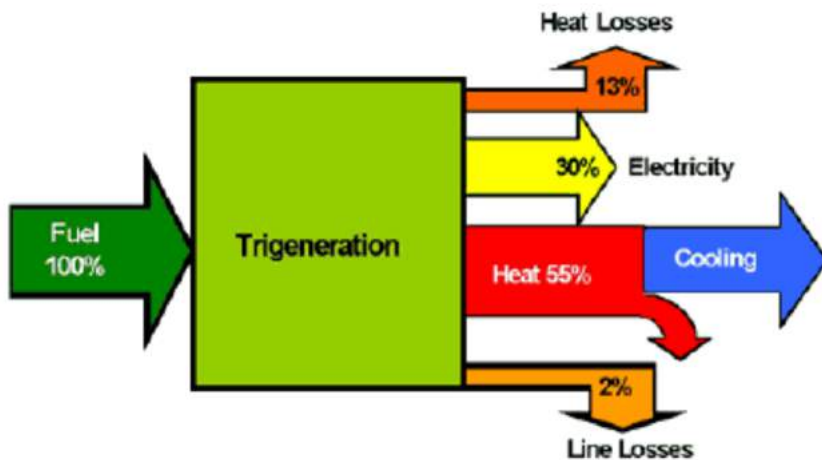
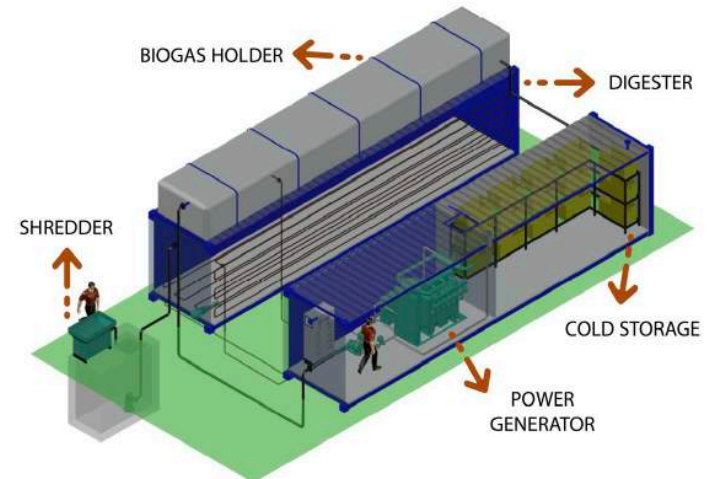
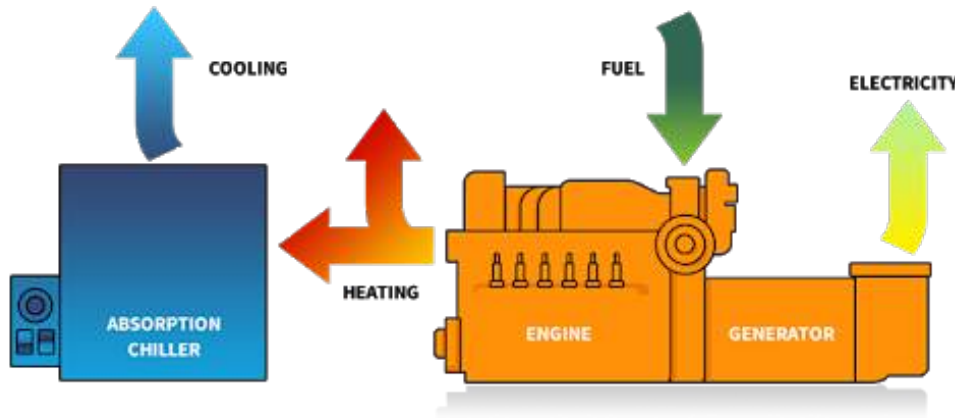
Bio CNG - Large scale



- Different agro feedstocks can be used
- Biogas enrichment with PSA technology
- Biogas enrichment with Membrane process
- Integrated pretreatment process
- Digestate nutrient recovery
- Algal production
- CO2 bottling
- Protein production with BSFL

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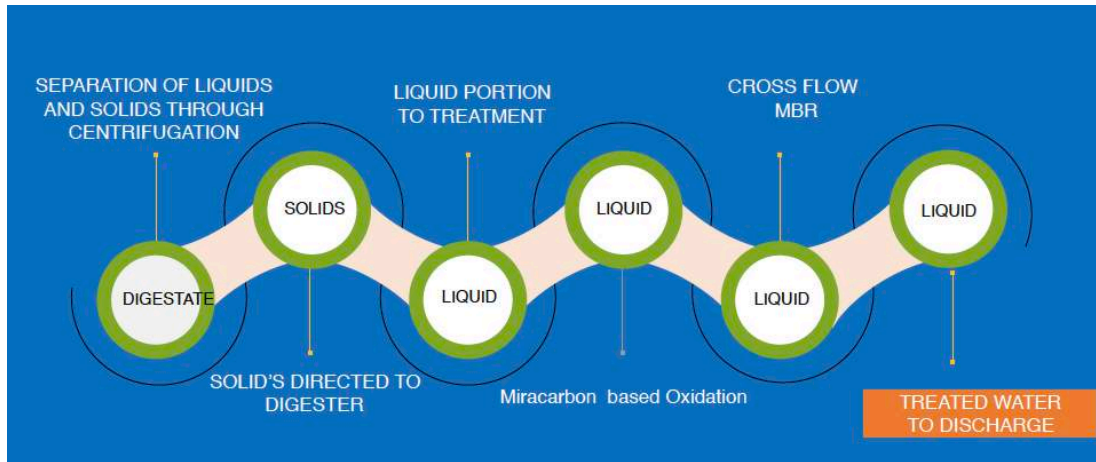
CCHP Solution



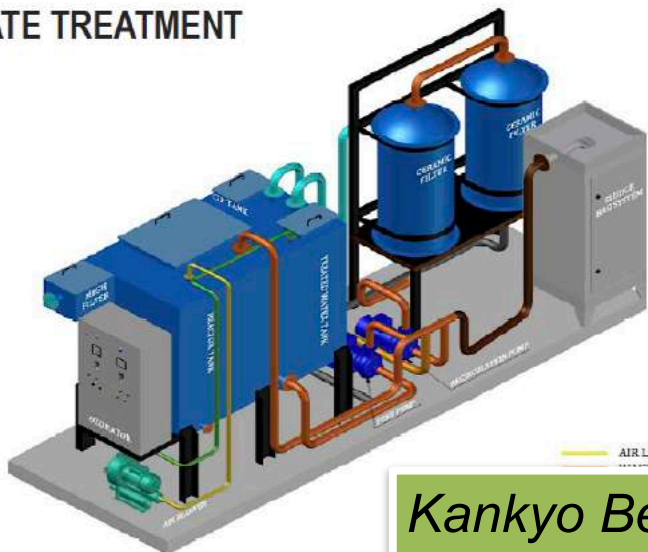
Advantages

- Onsite, high efficiency production of electricity and heat
- Reduce electricity consumption, reduce emissions and reduce costs substantially
- Reduce site CO₂ emissions by up to 60%
- Capture and reuse energy in the generator waste streams for new absorption chiller.
- Provide energy efficient cooling using waste heat
- Achieve a total system thermal efficiency of up to 85%.

Digestate treatment



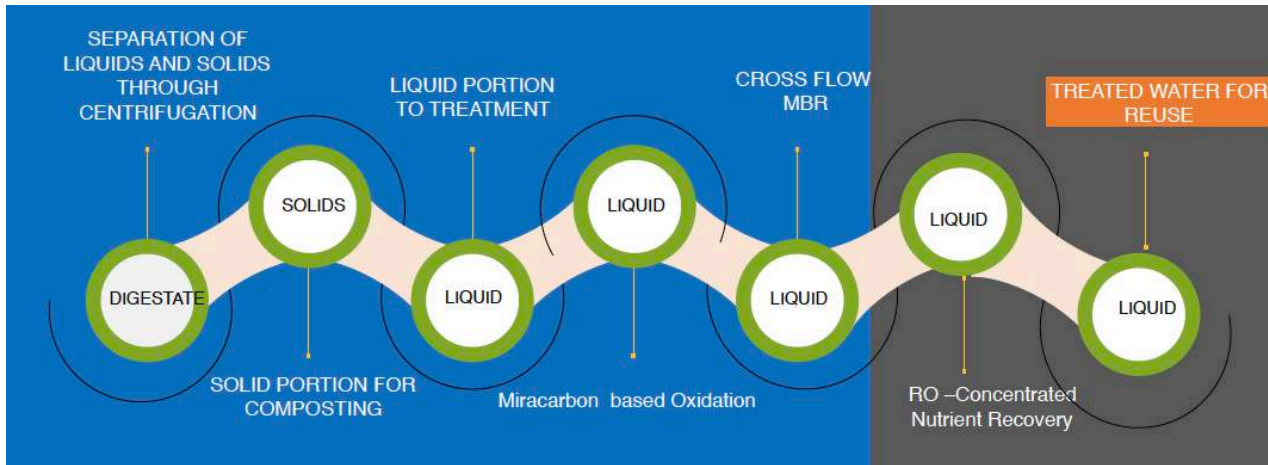
DIGESTATE TREATMENT



Treatment ensures the discharge parameters are met as per the local discharge regulation. The treated water can be used for slurry preparation or used for irrigation.

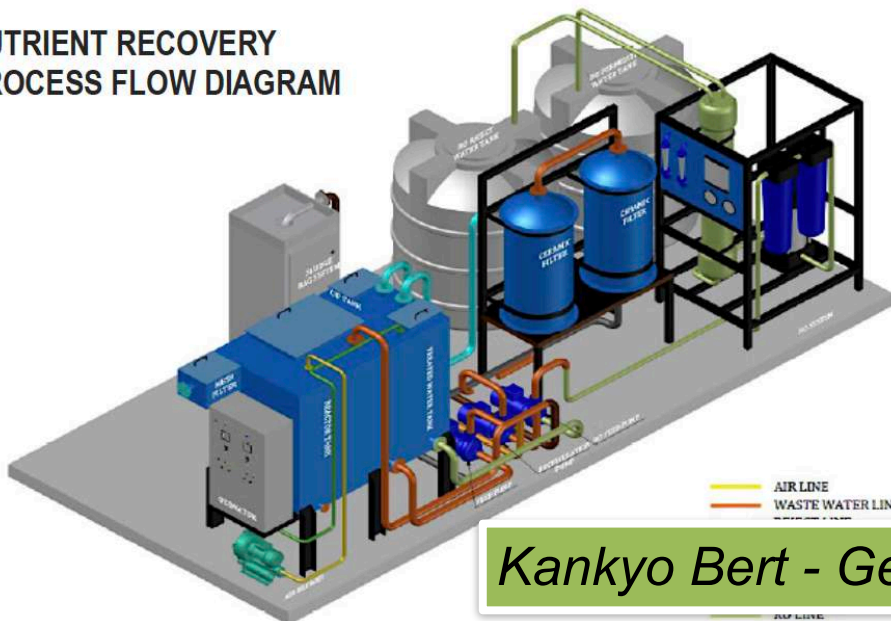
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Nutrient Recovery



1 TONNE
of artificial fertiliser replaced with digestate
saves 1 tonne of oil, 108 tonnes of water
and 7 tonnes of CO₂ emissions

NUTRIENT RECOVERY PROCESS FLOW DIAGRAM

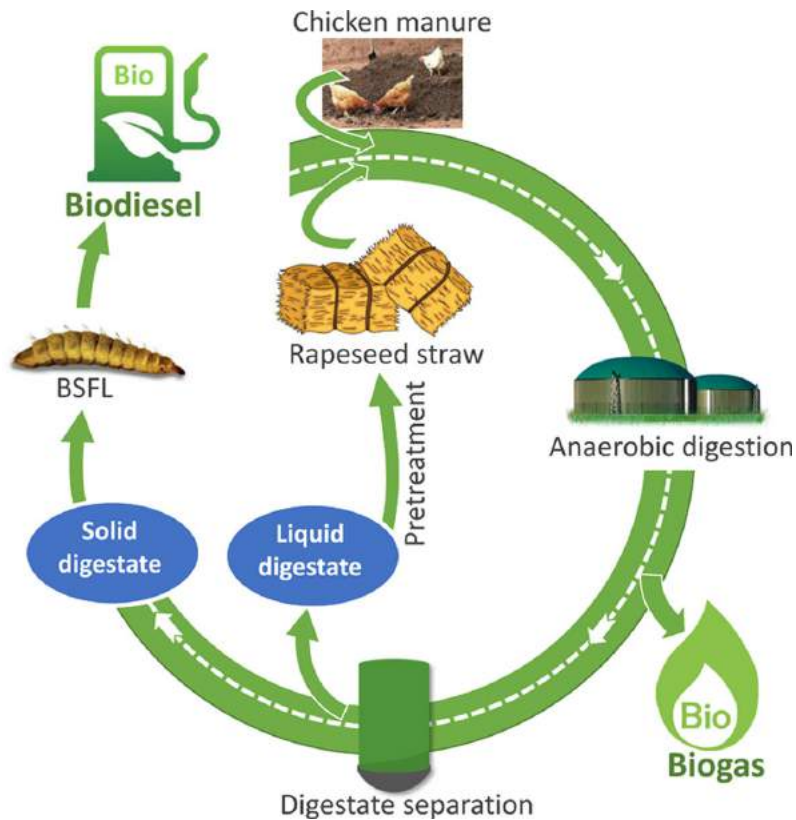


USES

1. Increase the value of digestate;
2. Secure use of digestate;
3. Create new markets for digestate products;
4. Decrease the operating costs (OPEX) of the facility.
5. Ensure more secure and sustainable outlets for digestate products; and potentially reduce the operating cost of the facility.
6. Reduce the dependence on land application

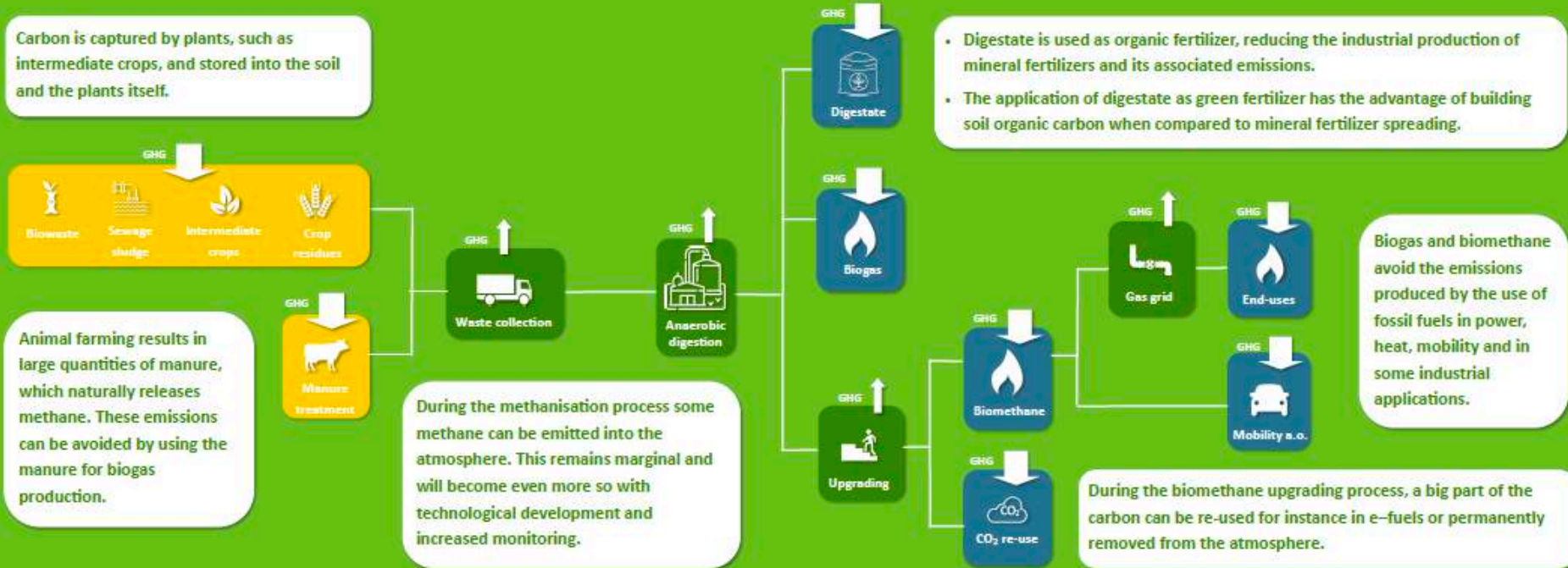
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Protein Production



- BSFL is a rich protein and fat source ideal for poultry feed
- Biodiesel can be produced
- Produces enriched frass
- Additional revenue stream

GHG mitigation



1
TON
CONTAINERIZED
BIOGAS PLANT

offset



1.5 Tons of CO2 emissions

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References



Dillingen, Germany

- Fermenter: 200m³
- CHP: 30kW
- Start: Okt. 2012

CATTLE SLURRY



France

- Fermenter: 600m³
- CHP: 50kW
- Initial: 44,0kW
- Start: Feb. 2013

PIG SLURRY



Udine, Italien

- Fermenter: 300m³
- CHP: 40kW
- Initial: 27,1 kW
- Start: Feb 2013

CATTLE SLURRY



Matsuyama / Japan

- ❖ Digester: 800m³
- ❖ CHP: 100 kW
- ❖ Start: 2019

**DIVERS WASTE
BIOMASS**

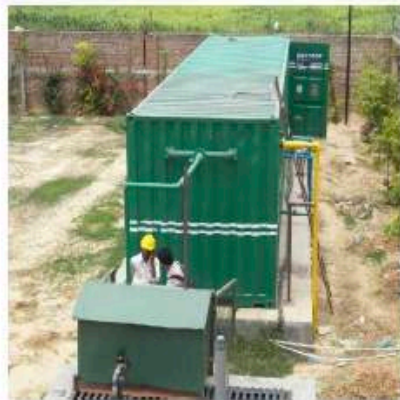


South Africa

- ❖ Fermenter: 600 m³
- ❖ CHP: 115kW
- ❖ Initial: 94,3 kW
- ❖ Start: Dec 2012

**SLAUGHTERHOUSE WASTE
WITH CATTLE SLURRY**

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Lease Options



Kankyo Bert Mobil is the first and only biogas plant in India that can be bought by leasing! This is a major breakthrough since capital investment always is a critical issue.

Kankyo Bert is being supported by a leasing partner who would provide OPEX solutions for our customers if required.

Features of the Leasing facility:

- ✓ Leasing rates can be as low as 0% IRR
- ✓ Renewable energy depreciation of 80% in the first year is fully applicable
- ✓ GST Neutral Structure
- ✓ Upto 5-year leasing can be structured (Bert Mobil 5-year warranty for the digester)
- ✓ One would have the option to return, extend or buy the equipment at end of the lease term



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Knowledge Platform

Bert Online Biogas Academy

www.boba.bio

Eco Lab Training & Research



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Biogas ...truly sustainable



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