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SIMPLY WASTE ?

A monthly newsletter on waste


SOURCE : CANVA

IN THIS ISSUE

800+
Biogas plants installed

22,995
Tons of CO_2 offset every year

547
Tons of LPG substituted every year

28.8
Lakh liters of organic manure generated every year

Green Connect®
Resource Management Solutions
ISO 9001:2015

Ramanujar Temple's Green Initiative: Harnessing Biogas from Cow Dung for Sustainable Cooking

In 2018, Ramanujar Temple in Salem took a significant step towards environmental sustainability by installing a 75 kg cow dung biogas plant. This remarkable initiative was born out of a necessity to manage the 50-60 kg of cow dung waste generated daily by their six cows. The temple, established in 2017 to commemorate the 1000th birth year of Sri Ramanujar, actively sought eco-friendly solutions and stumbled upon the idea of biogas.

After extensive research, the temple zeroed in on a biogas system and was particularly impressed with the offerings of Green Connect. Despite exploring various companies in the biogas sector, the temple officials found Green Connect's products and services to be superior, prompting them to install a biogas plant. The plant produces 3 cubic metres of biogas daily with 30 - 50 kg as feedstock per day. 3 cubic metres of biogas is equivalent to 1.5kg of LPG.

Utilising the biogas for three to four hours of daily cooking, the temple prepares prasadams, contributing to a cleaner and greener environment. They encountered a blockage issue in the biogas plant, but efficiently resolved it. For stove blockages, the burner top is removed and the blockage is cleared with an iron scrub. In cases of inlet feed pipe blockage, caused by large particles, a plunger is used to push the particles out, repeating the motion until the blockage is released. Regularly mixing cow dung or food waste with water in the appropriate ratios is crucial in the operation of a biogas plant to prevent blockages. The ideal mixture for food waste and water is 1:2, while for cow dung and water, it's 1:1. This practice facilitates smooth digestion processes and enhances the efficient production of gas.

The environmental commitment of Ramanujar Temple extends beyond energy production. The slurry generated from the biogas plant serves as a natural fertiliser for the temple's coconut trees, forming a closed-loop system of sustainable practices. The temple's adoption of Green Connect's biogas plant highlights their dedication to environmental consciousness and the use of alternative energy sources, setting a commendable example for others to follow.

Transforming Farm Waste into Green Energy: A 7-Year Success Story with Green Connect Biogas Plant

In 2016, K. Raghavan, a resident of Thirchy, installed Green Connect biogas plant at his home. Motivated by the potential of utilizing alternative energy from cow dung, he took a step towards sustainable living. With a farm housing three cows, Raghavan saw an opportunity to transform cow dung into a valuable resource.

Having learned about Green Connect through an advertisement, Mr. Raghavan visited the company to explore the feasibility of a cow dung biogas plant. Impressed by the company's offerings and services, he further validated his decision by consulting existing customers who shared positive feedback about Green Connect biogas solutions. Convinced of the benefits, Mr. Raghavan proceeded to install a 40 kg cow dung biogas plant in his home. 2 cubic meters of biogas can be produced daily with 40 kg per day of cow dung as feedstock. 2 cubic meters of biogas are approximately equivalent to 1 kg of LPG.

Since its installation in 2016, the biogas plant has been consistently operational, providing a reliable source of alternative energy. Seven years later, as of the current date, Raghavan continues to utilise the biogas for two hours daily.

The slurry from the outlet is mixed with water and used in the garden as manure. The sustained performance of the biogas plant reflects its durability and efficiency in waste management.

K. Raghavan's experience stands as a testament to the success of Green Connect's biogas solutions. The longevity and reliability of the installed biogas plant showcase its positive impact on alternative energy generation and sustainable waste management. This success story underscores the potential of biogas technology in fostering a cleaner and greener future.

Sustainable Biogas Implementation at Periyar University

In 2015, Periyar University, based in Salem, installed a Green Connect biogas plant with a capacity of 40 kg for food waste management. The initiative stemmed from the university's commitment to environmental sustainability and its desire to contribute positively to its surrounding ecosystem.

Seeking a reliable and sustainable solution, Periyar University collaborated with Green Connect. The university aimed not only to manage its food waste efficiently but also to actively engage in environmental stewardship and experiential learning opportunities for its community.

The biogas plant, with an 8 cubic meter capacity, is equivalent to 4 kg of LPG. It has the capability to process 40 kg of food waste per day; however, at Periyar University, they only utilize 20 kg of food waste daily. Since its installation, the biogas plant has been operational, primarily for canteen purposes such as heating water, boiling milk, and eggs. The plant runs for approximately 1.30 to 2 hours per day, effectively converting food waste into biogas. The resulting slurry is used as a natural fertilizer for plants across the university campus, contributing to sustainable agricultural practices.

Despite its success, the project encountered minor issues, including the replacement of pipeline components and crusher motor services, which were promptly addressed. Overall, stakeholders express satisfaction with the project outcomes and the benefits derived from utilising biogas for daily operations, acknowledging that these simple service works are common, and with proper maintenance, they can be avoided as well.

The waste management process facilitated by the biogas plant has earned recognition from NAAC accreditation, highlighting Periyar University's commitment to sustainable practices and environmental responsibility.
The Green Connect biogas plant at Periyar University stands as a testament to the institution's dedication to sustainable development. Through innovative initiatives like this, the university continues to inspire and educate its community towards a greener future.

Sustainable Wastewater Management at Aravind Eye Hospital

IMAGE SOURCE: ARAVIND EYE CARE SYSTEM

In the pursuit of providing low-cost, high-quality eye care to economically disadvantaged individuals across India, Aravind Eye Hospital stands as a beacon of compassion. Beyond its medical mission, the hospital has embarked on a noteworthy environmental initiative, implementing a low-cost, efficient Domestic Wastewater Treatment System (DEWATS) to address the water needs of its residential blocks.

The project aimed to install a DEWATS that could effectively treat domestic wastewater, meeting the stringent standards set by the State Pollution Control Board. The system, commissioned in 2003, comprises a Settler, Anaerobic Baffle Reactor, Anaerobic Filter, Planted Gravel Filter, and Polishing Ponds. By separating black and grey water streams and employing various treatment modules, the hospital successfully achieved the treatment goals, producing water compliant with environmental standards.

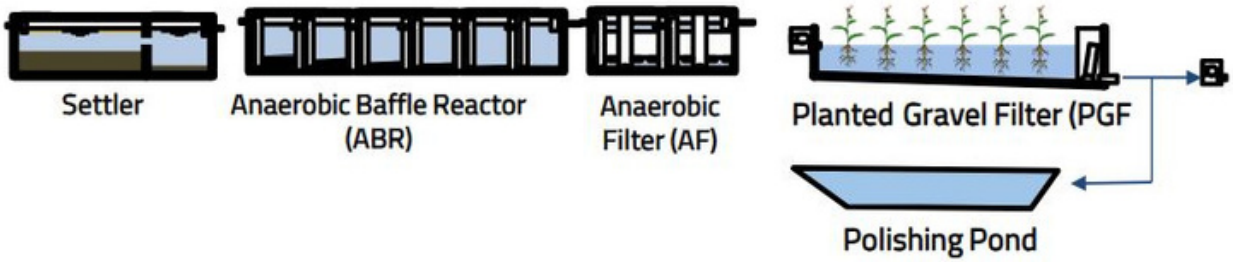
With a capacity of 307 KLD (Kiloliters per day) and serving 750 users, the DEWATS at Aravind Eye Hospital stands as a model for sustainable wastewater management. The system's efficiency, at an impressive 95%, ensures the responsible use of resources. The project, funded and implemented by the hospital itself, in collaboration with the Centre for Scientific Research and Pondy Auro Services, highlights the institution's commitment to environmental care.

The DEWATS operation involves low maintenance tasks, such as regular pump operations and plant trimming, coupled with periodic checks of sewer line systems. The electricity costs for operating the system are minimal, with four motors running for eight hours daily. Notably, the hospital reuses treated water for landscaping, and the sludge from the system is transformed into nutrient-rich manure through composting.

Aravind Eye Hospital's DEWATS project exemplifies a successful convergence of healthcare and environmental responsibility. By embracing sustainable wastewater management practices, the hospital not only meets its operational needs but also contributes to the larger goal of preserving

and enhancing the environment. This case study stands as an inspiration for healthcare institutions seeking holistic approaches to their impact on both human well-being and the planet.

Source: cddindia.org



Green Connect December'23 Update

Service:

- Ramco cements limited, RR Nagar, TN - Slurry pump and Crusher for biogas plant has been serviced.

Accessories:

- Chettinad Cement Corporation Pvt Ltd, Dindigul, TN - Biogas Booster Pump has been supplied and installed.
- Summits Hygronics Pvt Ltd, Coimbatore, TN - Biogas Balloon has been supplied and installed.

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