

Microbial consortium based biofertilizer for increased Ramie Fiber yield

APPLICATION

The innovative process can be deployed as a part of effluent treatment process in various industrial ETPs like – dairy ETPs, fertilizer ETPs, etc.

COMPANY NAME

Waste to Wealth Innovative Technologies LLP

FOUNDERS' NAME

Shaon Ray Chaydhuri
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TECHNOLOGY READINESS LEVEL (TRL)

TRL: 7 (The process is currently under the pilot scale operations)

INTELLECTUAL PROPERTY

Indian Patent App No: Bio-fertilizer production from bacterial consortium: 201731003023

Microbial consortium and process for degumming of Ramie fiber: 474317 (Granted)

PROBLEM ADDRESSED

The small and medium scale dairy installation can afford to treat their effluent with the current technology (generating valuable resources) which was not possible using the existing elaborate technologies in the market. The fresh water could be used for potable purposes instead of wasting for non-potable applications like agriculture. The environment could be protected from the adverse effect of chemical fertilizer leaching while providing nearly free fertilizer (INR 7/1000lit) for the land owners in the vicinity of the dairy ETP, ensuring round the year fodder and economic crop production in those lands. Adequate agricultural practice will ensure manpower involvement and hence livelihood generation.

ABOUT THE TECHNOLOGY

Waste to Wealth has developed a process to convert milk processing plant wastewater into liquid biofertilizer within 16 hours using 70% less space (for effluent treatment plant installation), 89% less energy (for system operation) and about 90% less CO₂ equivalent gas emission. The effluent is converted into a value added product which can replace the use of fresh water and chemical fertilizer for agriculture, hence preserving fresh water for drinking purpose. In addition, the investment on effluent treatment by the ETP operators can be converted into a revenue earning proposition during long term operation. The developed biofertilizer is effective in growth enhancement for 17 types of economic crop ensuring environmental protection

FUNDS RAISED/ACHIEVEMENTS

- Received BIRAC BIG Grant worth INR 50 lakhs
- Received MSME Startup Fund worth INR 15 lakhs
- Received Regional Climate Launchpad winner in 2019
- Received Visitor's award in Technology Category 2019
- Received NASI Reliance Industries Platinum Jubilee Award 2020

PRODUCT IMAGE

11 m³/day bioreactor



9 m³/day bioreactor



USP

- Effluent is converted into liquid biofertilizer
- Developed biofertilizer is effective in growth enhancement for 17 types of economic crop
- High efficiency and low running time
- Requires 70% less space for installation
- 89% less energy consumption and about 90% less CO₂ equivalent gas emission
- Low capital and operational cost

END USERS/CUSTOMERS

Effluent treatment plants, Dairy industries, Fertilizer industries, etc.