AEROBIO®

Mfd by :

AEROBIO

A Complete Human Waste Management Solution

INTRODUCTION OF AEROBIO BACTERIA :

With increasing human population and changing lifestyles, human settlements have come up in different landscapes including mountain sides, deserts and river banks. However, development processes have often lagged behind fast urbanization as a result of which there has been unplanned expansion of cities and town in many parts of our country. One of the systems that have been most neglected has been that of proper treated sewage disposal. Irrespective of continuous efforts by our governments- both central and states, we are still in need of better **'human faeces' disposal systems.** Along with the new waste that is been added to our surrounding environment on a regular basis, tackling the existing waste is also a matter of concern. In particular, human faecal contamination of groundwater resources is a major problem nationally.

New technologies involving biological communities are increasingly used as part of innovative solutions to tackle issues such as dealing with sewage and human faecal contamination of environment. Based on the existing knowledge, we have developed new consortia of bacteria that are capable of fast break down of human faeces. With continuous and detailed research over months, these bacteria have been made more efficient in using human faeces as 'food' for growth and in turn breakdown the different components of human faeces. The bacterial consortia can prove to be very useful for tackling environmental issues, in particular those of public health concerns such as groundwater contamination with human faeces.

One of the primary concerns with release of human faeces is ground water contamination. Instances of open defecation are a challenging problem in India. Open defecation is not only an immediate health and environmental hazard, entry of human faeces into our river systems lead to a long term concern. In a river based country like India, river water is used for multitude of purposes including for drinking and washing. Therefore, contamination of river and ground water is a challenging problem and nationally Government of India has taken numerous initiatives to deal with this impending issue that concerns public health. Additionally, such contaminated groundwater becomes a repertoire of human diseases that can spread among both animal and human populations essentially risking a lot of lives and draining the available healthcare system. The bacterial consortia developed by us can essentially be a control of such ground water contamination issues. Our research results show that these 'fast growing bacteria' can completely degrade human waste resulting in clear effluent that is safe to be released into the environment. Our results also demonstrate that the pH of this effluent water is well within the studied and permissible levels of water marked 'safe' for use.

An additional concern of using biological products for waste treatment is accumulation of these very biological products in the environment. Previously, used biological products have shown bioaccumulation and biomagnifications in the environment. Our bacterial consortia are derived from the natural environments and hence are essentially already present in and around us and hence are 'safe'. Additionally, since these bacteria essentially survive only on human faeces, in the absence of the human faeces, their number would decrease drastically and thus do not affect the surrounding environment adversely. Again with the addition of human faeces, these bacteria would divide and thrive in numbers well enough to degrade these products. The developed bacterial consortia are essentially self sustaining and hence would be a 'sustainable' solution to our growing problems of human waste disposal systems. Thus, the use of these bacteria consortia would be a safe and sustainable solution to tackling human waste in our rapidly developing economy.

Todays Discussion

- AEROBIO - The Introduction
- The Problem
- The Solution
- The Birth of AEROBIO
- Why Now?
- Traction
- Target Market
- Competitors
- Competitive Advantage
- Competitor Approach
- Contact Us

AEROBIO - An Introduction

Description

- An Aerobic Microbial formulation consisting of microbes which are indigenous to India and exhibit metabolic capability to thrive in variety of micro-niches including sewage, human faeces and untreated municipal sewage.
- The microbes are obligate aerobic species, fastidious and are typically gram positive and gram negative representatives. These microbes have doubling time spanning from 10-30 minutes and can metabolize wide forms of complex molecules.
- Regardless of the nature of substrate that makes up the micro-niches the end products of metabolism include water as well as carbon-dioxide.
- Following the application of Aerobio formulation in various micro niches, the values of key chemical and biological parameters in end products such as total solids, total dissolved solids, total volatile solids, chemical oxygen demand and faecal coliform are within the range of CAMTECH and CPCB.
- The formulation is made up of a harmless, non-pathogenic to all forms of life and does not lead to succession and replacement of local microbial communities in the site of application.

PROBLEM

Issues We Face as a country on Human Waste Management

Sewage Treatment Plant

Operational and Management

Traditional Septic Tank

Predictability and Traceability

Third Party Accountability

Accountabilty and UN Environmental Protocol

Solution AEROBIO Provides

AEROBIO has been researched and developed based on the current situation faced by organisations and communities in India to resolve the human waste management issues we face keeping in mind all the parameters for ease of operation and the diverse geography of the country.

Ease of Management

Cost and Management Solution

Operational Ease

Eradicate the traditional practice of Evacuation

Environmental Friendly

Indigenous Bacterial Consortium

Birth of AEROBIO

The Timeline

2017

Extensive Research and Development Works undertaken by Prof Punyasloke Bhadury.

2018

Evaluation of the Product and Independent Field Trails in various different geographical regions of the country

2019

Research and Development work on **A**EROBIO **completed.**

Birth of AEROBIO

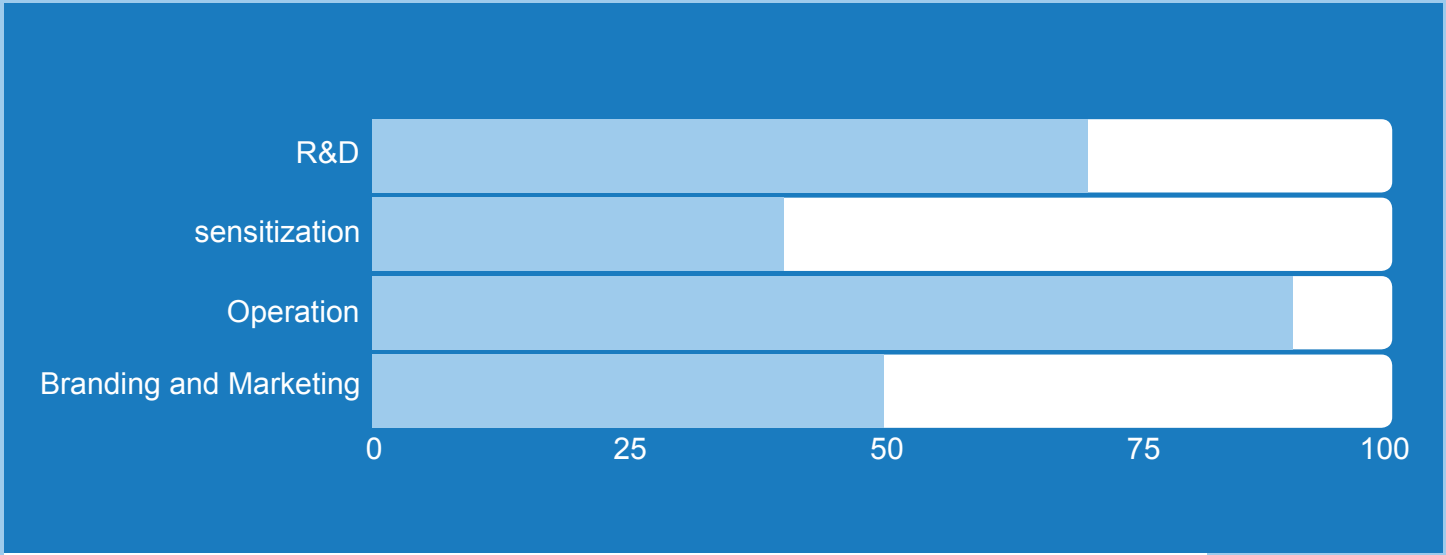
Why Now?

Save and Recycle

- Ground Water
- Self Sustainability
- Accountability

Situational Compatibility

- Land
- Air
- Water

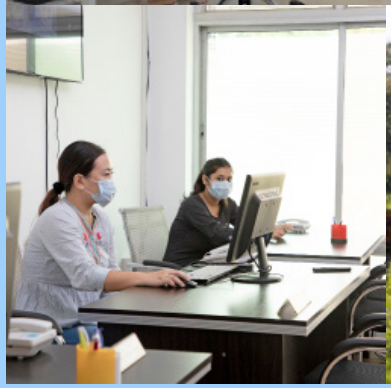


Traction

- R&D for AEROBIO extensively done to cover all the geographical area of the country covering sub-zero temperature to the hottest regions of the country.
- World Class Laboratory and Manufacturing Plant set up for Production of the Product for Organisational deployment and requirements.







Target Market

AEROBIO aims at making an Impact largely through Organisational and Municipality distribution.

Fecal sludge collecting Tanks in :

Public Transports
Railways
Cargo Vessels,
Passenger Ships
Fishing Trollers.

Bio-Toilet digesters/Tanks
Portable Toilets Tanks
Pit Latrines
Septic Tanks
Fecal sludge collecting STP's

Competitors

Traditional Septic tank Evacuation

Competitive Advantages

01 Indigenous bacterial consortium

02 Indigenous bacterial consortia are non pathogenic and environmentally friendly.

03 Complete Methane Gas Breakdown in the first 24 hours

04 Made in India
AtmaNirbhar Bharat Initiative

Competitor Approach

Cost Effective Performance Driven Product

Minimal Maintainance Effort

Self-Sustainable and Environmental Impact Priority Approach


EROBIO

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UDYAM Registration Number : UDYAM-NL-01-0000353

IAS ACCREDITED™ Management Systems Certification Body MSCB-119
ISO 14001:2015

IAS ACCREDITED™ Management Systems Certification Body MSCB-119
ISO 9001:2015

MAKE IN INDIA

स्वच्छ भारत
एक कदम स्वच्छता की ओर

MADE IN INDIA

स्वच्छ भारत
एक कदम स्वच्छता की ओर

Atmanirbhar Bharat