Excel’s Initiatives

on

Capacity Development Program in Environment Management

K.J Somaiya College of Science & Commerce, Vidyavihar
Date: 9.02.2017
Excel’s Journey of 25 Years in Solid Waste Management

• Committed to the cause of Municipal Solid Waste Management for over 25 years in India

• Pioneers of Centralized and de-centralized MSW Composting

• Provided Composting Technology for over 12 plants across India and Mauritius of capacities between 300 TPD to 700 TPD

• Developed the concept of de-centralized Solid Waste Management in India

• Now providing de-centralized Solid Waste Management solutions using Organic Waste Converters to around 1,500 Bulk Waste Generators

• Also providing de-centralized Waste Water Treatment solution using Bio Filter developed by its sister company Transchem Agritech.

• We are the first to launch a comprehensive mobile waste treatment service, MobiTrash, in India. It treats the organic segregated waste on your own site.

www.excelind.co.in
Commitment to Sustainable Development

Solid & Liquid Waste Management

Watershed Development

Organic Agriculture, Certification, Contract Farming

Wasteland Development

Integrated Crop Management

Soil and Nutrient Management

www.excelind.co.in
Excel’s Journey – Providing Waste Management Solutions

- **1980**: Started experimenting with organic waste
- **1990**: Composting at Excel’s factory in Amboli, Mumbai with 2 truck loads of waste
- **1994**: First MSW to Compost Plant at Chincholi, Malad, Mumbai 300 TPD
- **1997**: Started experimenting with organic waste
- **1999**: 500 TPD Municipal Waste to Compost Plant in Ahmedabad
- **2004**: 700 TPD Waste to Compost Plant in Kolkata
- **2006**: First OWC installed
- **2007**: Organic Waste Converter, OWC is born
- **2010**: 2 TPD OWC Plant at Aundh, Pune
- **2011**: 6 Waste to Compost Plants at APMC, Uttarakhand
- **2014**: Launch of MobiTrash
- **2015**: Invessel Waste Treatment Technology, Bioneer
- **2016**: 300 TPD Waste to Compost Plant in Mauritius

Excel Industries Limited

Environment and Biotech Division
MUNICIPAL SOLID WASTE

MIX WASTE
- CENTRALIZED MSW PLANT 100 TO 300 TPD

SEGREGATED ORGANIC WASTE
- DECENTRALIZED PLANT 5 & 10 TPD
- COMPOSTING MACHINE (OWC) STATIONERY MODEL 100 TO 2000 KG
- ORGANIC WASTE TREATMENT MACHINE BIONEER 50 TO 400 KG
- DOOR TO DOOR SERVICE MODEL PAID SERVICE MobiTrash
A) Details of Centralized Plant

Converting Municipal Solid Waste (input) into Compost (Output) by the process of aerobic decomposition using Microbial Culture.

300 TPD MSW - COMPOSTING PLANT

Land : Around 10 Acres

Total CAPEX excluding land cost : Rs. 25.00 Cr
Centralised Municipal Solid Waste Treatment & Processing Plant

Schematic Process Flow

1. Municipal Solid Waste (Input)
   - Leachate Collection

2. Windrow Preparation, Spreading of Bio-reactor, 7 days holding

3. Windrow Turning
   - Temperature + Moisture check

4. Windrow Turning II

5. Windrow Turning III

6. Drying on Platform
   - Fermented Material

7. Feeder Conveyor to Trommel
   - Semi-finished Material

8. Trommel 50mm

9. Trommel 30mm

10. Trommel 10mm

11. Finish Loose Material (Output)

12. Packaging, Storage and Disposal
Excel’s Centralized Plant at Ahmedabad
Centralized MSW Treatment – Excel’s Ahmedabad Compost Plant
OPTION – (A) 5 & 10 TPD SEGREGATED WASTE TREATMENT PLANT

Total CAPEX for 5 TPD Plant:
Land requirement : 1000 Sq. Mtr.
CAPEX : Rs. 1.5 Cr.
OPEX : Rs. 2,500/- per ton per day

Total CAPEX for 10 TPD Plant:
Land requirement : 1800 Sq. Mtr.
CAPEX : Rs. 2.8 Cr.
OPEX : Rs. 2,000/- per ton per day
APMC MARKET – MODEL (5 & 10 MT/DAY)
Composting Plant at the vegetable market, Thrissur

4TPD Capacity
COMMUNITY MODEL (ULBs) FOR 1-2 MT/DAY

Presenting, West Treatment Plant - 5 Tonnes per day

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De-centralized Model for ULBs – Municipal Ward, Aundh, Pune

www.excelind.co.in
De-centralized Model for ULBs – Municipal Ward, Mapusa, Goa
De-centralized Model for ULBs – Municipal Ward, Kakinada, A.P.
Option – B Organic Waste Converter Stationery Model

Using OWC system for treatment of Organic Waste by Bulk Waste Generators and converted into Compost:

Various Models of OWC:
1) For 100-3000 Kg per day OWC machines of 5 different models:
   • OWC 30 – 100-200 kgs/day (MS & SS Models)
   • OWC 60 – 250-400 kgs/day (MS & SS Models)
   • OWC 130 – 500-800 kgs/day (MS & SS Models)
   • OWC 300 – 1000-1500 kgs/day (SS Model)
   • OWC 500 – 1600-3000 kgs/day (SS Model)

2) Curing Systems:
   • Single Curing System (100 kg/day Capacity)
   • Double Curing System (200 kg/day Capacity)

3) Shredders:
   • Portable Garden Shredder (50 kg/hr)
   • High Speed Garden Shredder (100 kg/hr)
   • Double Shredder (50 kg/hr)

4) Other Products:
   • Segregation Table
   • Conveyor Belt
   • Manure Trolley
Treatment of Organic Waste with the help of Bioneer to give quick solution to the bulk waste generators:

**Various Models:**
50–400 Kg per day In-vessel Treatment Systems of 5 different models.

- Bioneer 50 (50 kg/day)
- Bioneer 100 (100 kgs/day)
- Bioneer 200 (200 kgs/day)
- Bioneer 300 (300 kgs/day)
- Bioneer 400 (400 kgs/day)
OWC Installations
Green Initiatives / CSR Activities by Responsible Corporate Citizens
OWC Installations
Green Initiatives / CSR Activities by Responsible Corporate Citizens
SECTORWISE SUPPLY DATA

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<td><strong>1480</strong></td>
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Office Memorandum

Sub: Organic Waste Converter System.

The undersigned is directed to say that the Solid Waste Management is an obligatory function of Urban Local Bodies in India. The Municipal Solid Waste (Management & Handling) Rules 2000 notified by the Environment & Forest Department of Government of India made the Urban Local Bodies responsible for segregation, collection, storage, transportation, scientific treatment & sanitary landfill of Municipal Solid Waste.

2. The Ministry of Urban Development has also taken initiatives to facilitate the State Governments/ULBs for effective solid waste management and brought out Manual on Municipal Solid Waste Management, Technology Advisory Group’s Report and Report on Integrated Plant Nutrient Management.

3. To supplement the efforts of State Government & ULBs, this Ministry has launched JNNURM & UIDSSMT for creating urban infrastructure facilities including solid waste management. It has been observed that the ULBs are facing constraint in getting adequate land in the urban areas for creating centralized integrated solid waste management facility, traffic congestion enroute to the centralized landfill site and increased transportation cost of waste. In order to address the issues of land constraint, and other related issues in centralized solid waste management system it is necessary to promote decentralized waste management system in cities/towns by ULBs which will not only encourage community participation for efficient recycling at source of generation but also simplify the waste management process and ensure sustainability.

4. It is felt that decentralized solid waste management solution should be incorporated while planning solid waste system for the cities and towns in the country.

5. The decentralized waste management with bio-mechanical "organic waste converter" developed by M/s. Excel Industries Ltd., Mumbai has been presented in the Ministry and functioning in some places at Mumbai, Pune, Bangalore, Surat, Ahmadabad, etc. A copy of the "Organic Waste Converter" catalogue is enclosed for reference.

6. It is suggested to adopt such systems, if deemed fit, which not only promotes decentralized waste management solution but also facilitates waste minimization & efficient recycling process with community participation thereby reduce long term requirement for landfill sites in cities & towns.

(Savitur Prasad)
Director

To
Commissioners
All 63 cities covered under JNNURM(List attached).

TO WHOMSOEVER IT MAY CONCERN


Dear Sir,

Pune Municipal Corporation is suggesting various scientific methods of waste treatment & disposal as per the directives of Hon'ble Supreme Court and Govt. of India Gazette Extra Ordinary dt. 3/10/2000 & Ministry of Environment and Forests notification dt. 25/09/2000 and provisions of Environment (Protection) Act 1986 & Municipal Solid Waste (Management & Handling) Rules 2000 to all the residential & commercial property builders & their association. This organic waste management using organic waste converter system developed by Excel Industries Limited, Mumbai is technically at par with other methods of scientific waste treatment & disposal such as vermiculure, bio sanitizer & biomethanation. This system also comply MSW Bylaws & rules of all categories of MSW. We recommend this method for organic waste treatment & disposal.

Thanking you,

Dy. Medical Officer of Health
(Solid Waste Management) &
Nodal Officer
Pune Municipal Corporation
Department of Environment  
Govt. of NCT of Delhi  
Level 6th, Wing C, Delhi Secretariat, IP Estate, New Delhi-02  
Telefax: 23392029

To,  
Mr. Harshad Gandhi,  
Excel Industries Ltd.,  
184/87, S V Road,  
Jogeshwari (W), Mumbai-400 102.

Sub: Showcase OWC System at IITF event in Pragati Maidan from 14th to 27th November, 2007.

Ref: Discussion during the meeting on 25th October, 2007

Dear Sir,

The Department of Environment & Forests, Govt. of Delhi & Delhi Pollution Control Committee has decided to participate at IITF event in Pragati Maidan from 14th to 27th November, 2007 to showcase Green Initiatives of Delhi Govt.

For the decentralized organic waste management solution, you have demonstrated the functional utility of OWC System and OWC is being demonstrated since 22nd August, 2007 at Delhi Secretariat.

In view of functional utility & operational ease of OWC System at community & bulk waste generator level for organic Municipal Solid Waste (MSW) treatment, we have decided to showcase your OWC System in Delhi Pavilion stall at IITF event during 14th to 27th November, 2007. It is intended to make community aware about clean, neat & eco-friendly ways to deal with organic waste generated by hotels, hospitals, hostels, APMC, commercial kitchens serving daily meals to community/commercial houses, etc. It is further perceived that progressive Resident Welfare Associations (RWA) would come forward to set up OWC System in their neighbourhoods, which would help Govt. to reduce requirement of land for scientific waste disposal & make city cleaner, greener & healthier with participation of all stakeholders in waste chain.

We request you to provide one OWC System along with staff to operate and explain the process, for 14 days to showcase at IITF during 14th to 27th November, 2007. We will provide you space in this Department’s stall in Delhi Pavilion at IITF event and extend all assistance to showcase OWC System as a part Green initiatives support program of Govt. of Delhi.

Please Confirm.

Thanking you,

Yours Faithfully,

(Dr. Anil Kumar)  
Senior Scientific Officer (Env.)

MUNICIPAL CORPORATION OF GREATER MUMBAI  
SOLID WASTE MANAGEMENT DEPARTMENT  
No. CHE/12832/SWM/Gen-1597 of 06.12.2006

Office of the  
Chief Engineer (SWM),  
4th floor,  
Shree Chhatrapati Shivaji  
Maharaj Market Bldg.,  
Patton Road,  
Mumbai – 400 001.

To,  
M/s. Excel Industries Limited,  
184-87, Swami Vivekanand Road,  
Jogeshwari (West),  
Mumbai – 400 012.

Kind Attention: Shri Harshad Gandhi.

Sub:- Community based initiative for organic waste disposal by using Organic Waste Converter (OWC System).


Gentleman,

The “Organic Waste Converter” developed by M/s. Excel Industries were technically examined in detailed and found to be eco-friendly with beneficial impact to improve hygiene, minimize health hazards and convert organic waste into useful enriched material within shortest time. It also facilitates processing of biodegradable waste in compliance of M.S.W. (M&H) Rules-2000.

The “OWC” will be useful to large Societies, Housing Complexes, Eating Houses, Restaurants to dispose of their organic waste in eco-friendly manner. The Excel Industries will render their services of installation of such “OWC” to the users and with full back-up system to use these machines effectively.

Yours faithfully,

(R.R. Markandeya)  
Chief Engineer (SWM)/DMC (Env. & W.M.)
Dear 

Enclosed please find a copy of the letter of Shri Mahendra Trivedi, Hon'ble M.L.A. Bhavnagar, regarding "SANITRATE AND BIG-QUELLEM" developed by Excel Industries.

This bio-culture has been used effectively across Gujarat in the last three years during the time of floods with very encouraging results.

It would be worthwhile if you could consider using this BIO-QUELLEM for on going sanitation operations in the towns and villages.

With warm regards,

Yours sincerely,
(S.R. Rao)
Option - D Door to Door Service Model – MobiTrash

Door to Door Collection and treatment of organic waste using OWC technology (Paid service).

Benefits:
- No need of transfer station
- Minimum transportation cost
- No dumping yard required
- Opportunity to self employment (micro entrepreneurship).

Salient Features:
- Door to Door service
- No space required
- No capital cost to waste generators
Excel’s Initiatives  Awareness & Education
WHAT COLOUR IS YOUR GARBAGE?
TOGETHER WE CAN TURN IT GREEN.

PRESENTING THE ORGANIC WASTE CONVERTER FROM EXCEL.

Want to enhance your Green Quotient? We can show you how. Our Organic Waste Converter (OWC) transforms organic waste into odour-free flowable, homogenised raw compost in 15 to 20 minutes. When this is cured further, it gives nutrient-rich, soil enhancing compost which can be used to create terrace gardens, organic kitchen gardens and landscaping-- right in the heart of the city! Together, we can create a cleaner, greener, healthier environment. That's what responsible corporate citizens do.

Waste Processing
Capacity: 10/25/50/125/170 kg per batch

Excel Industries Ltd.
Ph.: 022 66464200 | Email: owc@excelind.com | http://www.excelind.co.in
Thank You