ecoWise

Resource Recovery

Biogas and Composting

Organic waste from industry and municipal sources is mainly composed of substrates such as carbohydrates, proteins, fats, cellulose, and hemicelluloses. They are usually high in moisture content and negative in calorific value. Aerobic composting, anaerobic digestion (biogas), or the combination of two are effective methods to recycle these materials.

Anaerobic Digestion - Biogas

Biogas is produced in a biological process when organic material (biomass) decomposes in a humid atmosphere in the presence of a group of natural microorganisms, i.e. methane bacteria. It mainly consists of methane and carbon dioxide. Biogas can be used for the production of heat and power.

Advantages of ecoWise Anaerobic Digestion System

- Effective volume and mass reduction
- Renewable energy production from organic waste
- Optimized microorganism ecology for best system performance
- Green House Gas (GHG) reduction - Clean Development Mechanism
- Complete system with no secondary pollution

Aerobic Composting – Organic Fertilizer

Compost is a humus-like product that can be used as organic fertilizer and soil conditioner. It is the product of aerobic biological decomposition of organic matter under controlled aerobic conditions.

Advantages of ecoWise Composting System

- In-vessel composting method with active control of essential conditions
- Optimized natural occurring microorganisms
- Small footprint with intensive thermophilic process
- Odor and bio-aerosol controlled system
- Integrated pasteurization process
- Green House Gas (GHG) reduction - Clean Development Mechanism

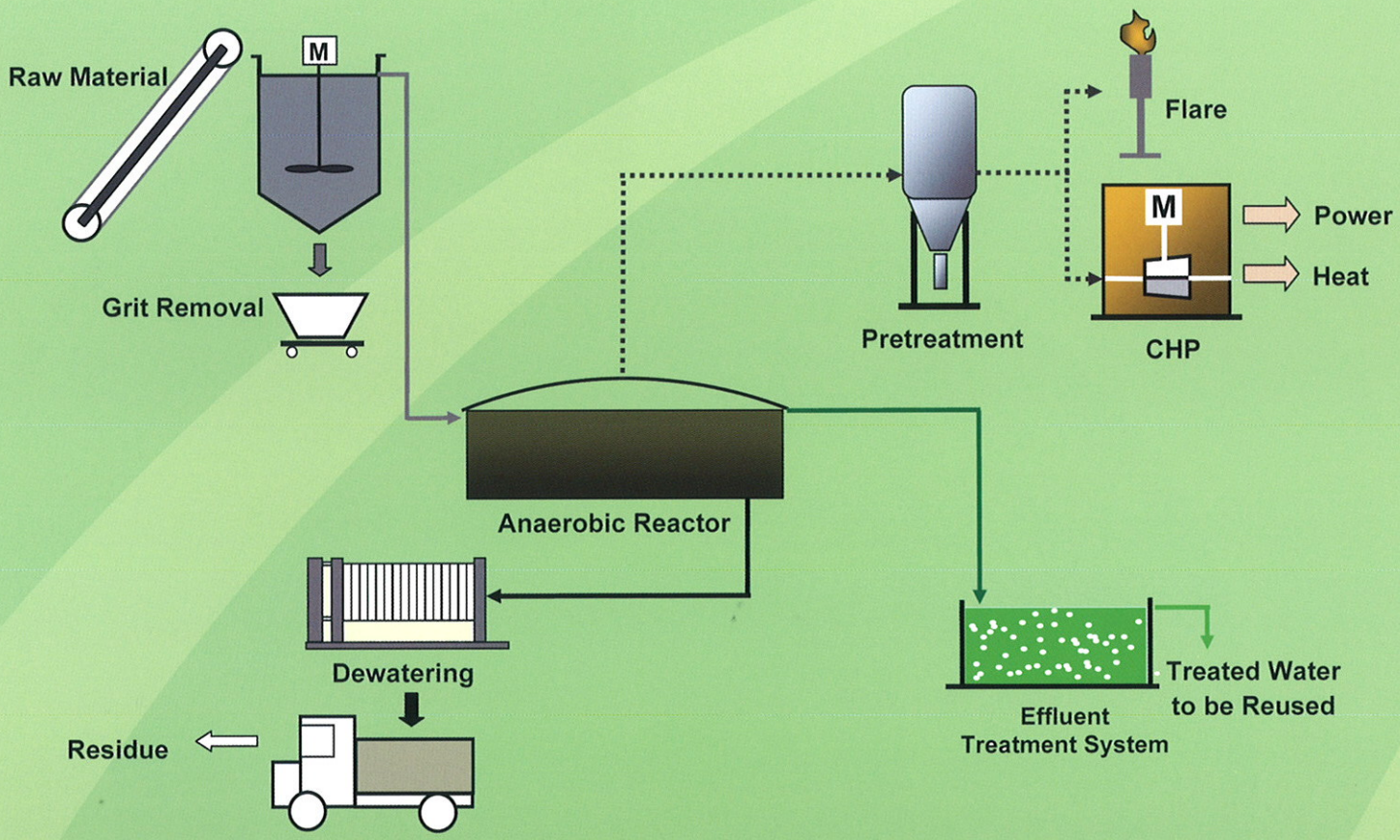
Suitable Organic Wastes

- Food residue
- Yard trimmings and horticulture waste
- Sludge
- Manure
- Municipal Solid Waste (MSW)
- Palm oil waste
- High strength wastewater
- Other waste

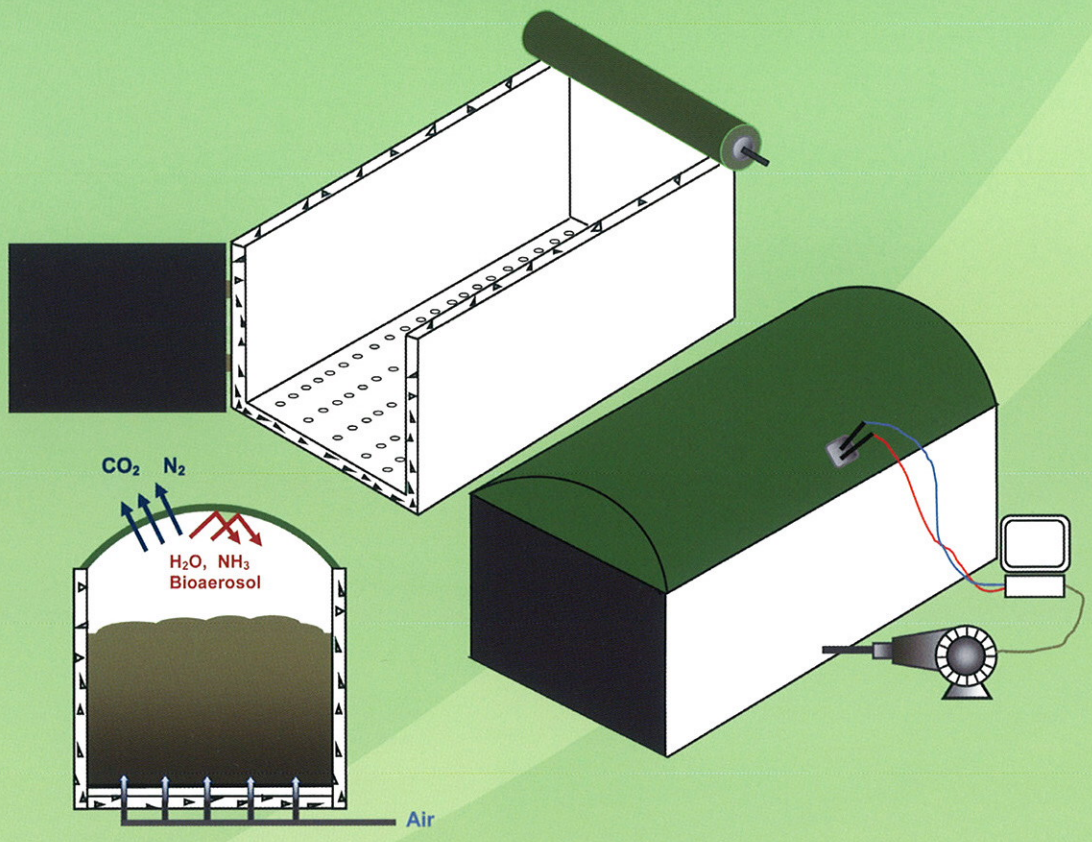
ecoWise Experience and Expertise

1. Project development, investment and management
2. Technical advise
3. Engineering, procurement and construction
4. Clean Development Mechanism (CDM) development
5. Management, Operation and Maintenance (MOM)

Anaerobic Digestion - Biogas



Aerobic Composting – Organic Fertilizer



Resource Recovery Biogas and Composting
有机固废资源回收 – 沼气和堆肥

有机固废的主要组成部分为碳水化合物，蛋白质，脂肪，纤维素和半纤维素等。他们通常具有较高的含水量并是负热值物料，无法直接燃烧。对于这些固废，堆肥，沼气或者两者的结合是最合适的资源化技术。

厌氧消化 – 沼气

沼气是在无氧的状态下，由微生物在潮湿的环境中分解有机物质所产生的气体。沼气的主要成分是甲烷和二氧化碳。沼气可以用来产热或发电。

绿科厌氧消化系统的优点

- 固废的体积和质量减量化
- 利用有机废料产生可更生能源
- 微生物的有效组合以达到系统最佳效率
- 温室气体减排-清洁发展机制
- 无二次污染

好氧堆肥 – 有机肥

堆肥可以作为土壤改良或者有机肥使用，它不但可以提高土壤的肥分，同时可以改善土壤的各种性质，如土壤结构，通风、保水和培肥的功能。堆肥是由微生物在可控的好氧条件下分解有机物质而生产出来的。

绿科好氧堆肥系统的优点

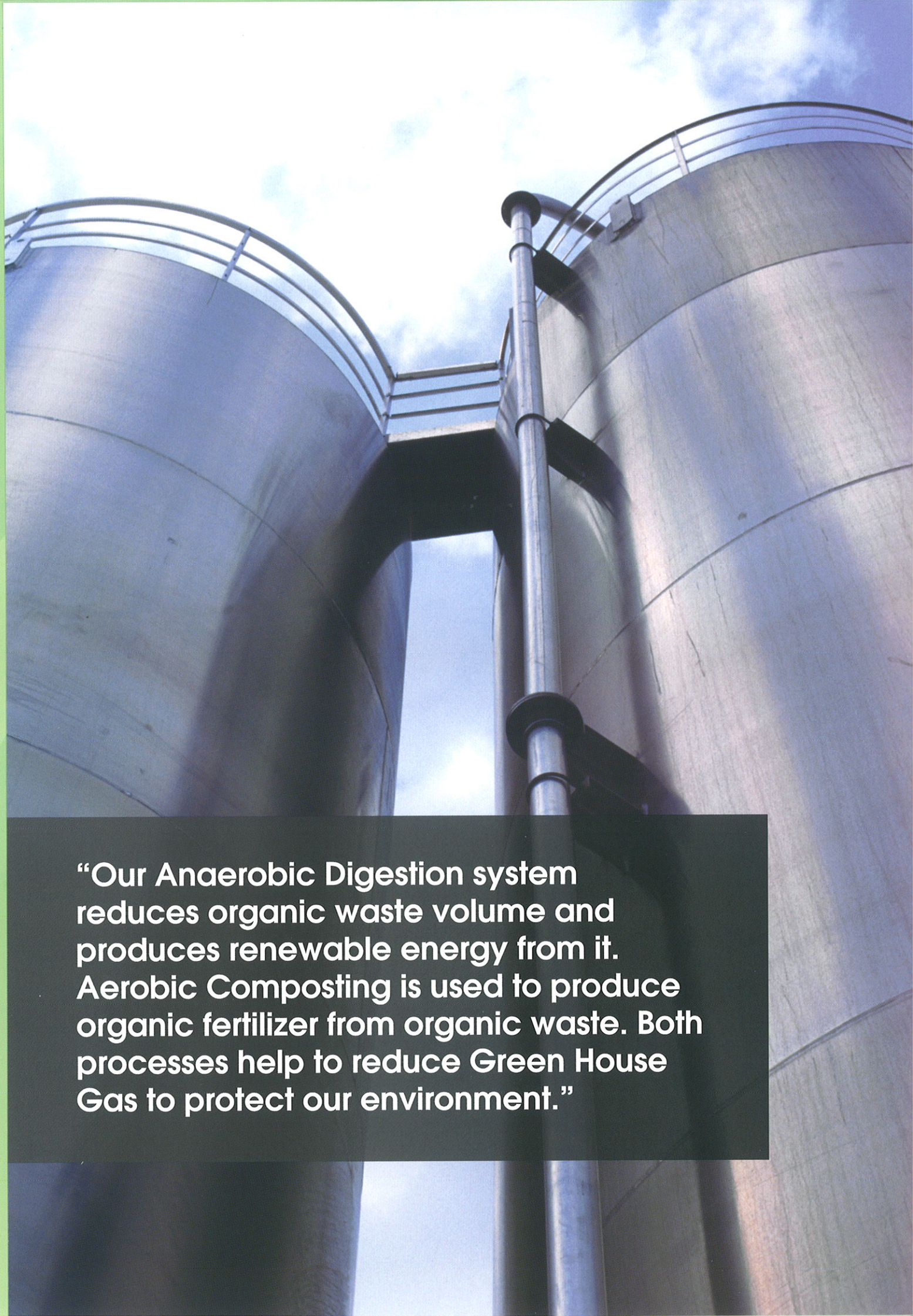
- 独特的密闭箱式堆肥系统可以主动控制反应条件
- 利用自然产生的微生物
- 提高高温好氧堆肥程度，减少占地面积
- 采用密闭箱式槽设计，控制气味和空气细菌溢散
- 有效杀灭有害菌和杂草种子
- 温室气体减排-清洁发展机制

适合有机废物包括

- 厨余和剩余食物
- 园艺废料
- 污泥
- 动物粪便
- 城市固体废物中的有机物
- 高强度污水
- 其他有机废物

绿科的专能

- 固废处理项目开发，投资和管理
- 技术服务
- 工程总承包
- 相关清洁发展机制项目开发
- 工厂运营和管理



"Our Anaerobic Digestion system reduces organic waste volume and produces renewable energy from it. Aerobic Composting is used to produce organic fertilizer from organic waste. Both processes help to reduce Green House Gas to protect our environment."

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