



MiSHiMAX

Powered by MIKUNIYA Corporation

Introduction of Organic
Waste Volume Reduction
System “Mishimax” by
Mikuniya Corporation,
Kawasaki JAPAN



September 29, 2022



Company profile

- **Name: Mikuniya Corporation**
- **Head Office Location: Mizonokuchi town, Kawasaki City Japan**
- **Founded: 16 October 1985**
- **Capital: JPY10,000,000 (\approx USD89,000)**
- **Total Sales: JPY1,893,000,000 (\approx USD17,000,000) [Oct 2020~Sep 2021]**
- **Employees: Engineers/Technicians: 125, Administrative staff: 68 Total: 193**
- **Main Business: Construction consultancy registration, Surveyors Registration**

FX rate USD/JPY@112.91

As of 30 Sept.,2021



Organic Waste Volume Reduction System

～MISHIMAX®～



MK-50 *
Reduces 50 kg per day

* It can process garbage generated by approx. 50 households (200 persons).

Organic waste is biodegraded using wood chips in the Mishimax fermentation tank.



Build resilient infrastructure, promote inclusive & sustainable industrialization and foster innovation



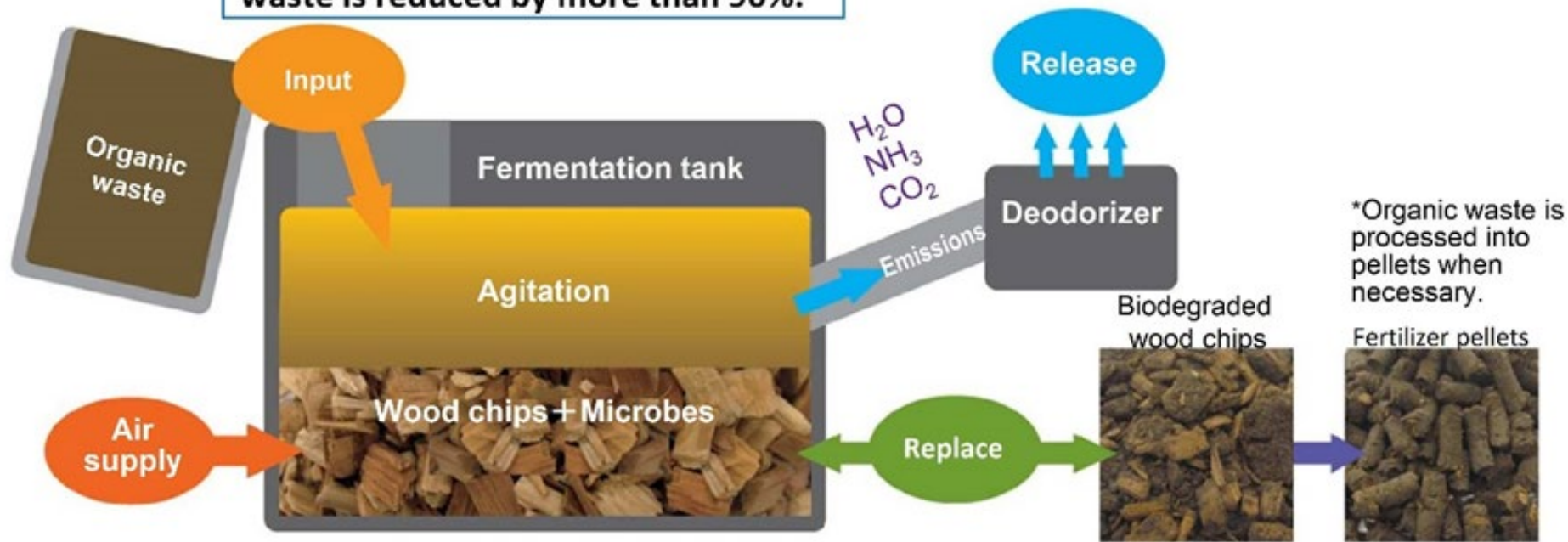
By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

Mishimax biodegradation process



Organic waste is biodegraded in the fermentation tank and the volume of waste is reduced by more than 90%.

Mishimax reduces the volume of organic waste like wastewater sludge, food waste by more than 90% in 24H.



1

Organic waste can be loaded into the wood chip-filled fermentation tank daily for 4–6 months.

2

Air is supplied to agitate the tank. CO_2 , H_2O , and NH_3 are generated through the fermentation process, thereby enhancing biodegradation. Existing microbes in the area are used for the process..

3

Odorants are decomposed using the deodorizer and released into the air.

4

The wood chips used in the fermentation tank are replaced after 4–6 months.

5

The biodegraded wood chips become available as organic fertilizer.

Issues and Solution



- Lack of final disposal landfill site due to large waste volume, **pressure on the remaining years of landfill life**
- Disposing the waste at the final landfill site directly because **recycling facilities are not developed**
- High construction costs by incineration plant
- CO₂ emissions through collection and transportation process



Installing Mishimax . . .

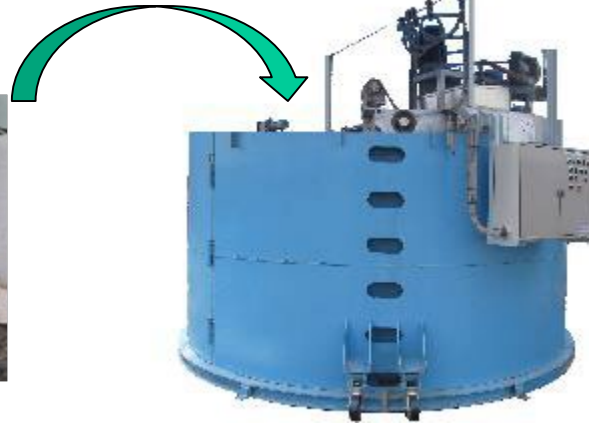


Solve the above issues !

Sustainable Resource Circulation



- Sludge after wastewater treatment (moisture content 83%)
1,000kg/day, continuously adding for 6 months



Mishimax[®] MK-1000

- Getting output (organic fertilizer)



**Apply to farmland
as a fertilizer**

Reducing volume (6 months)

Input

**Organic waste
(Everyday)**

**High-temperature
Aerobic fermentation &
decomposition**

Output

**Organic
fertilizer**

harvest

Market

**After consuming,
dispose as Waste**



Mishimax - Major Sales Performance

Location	Purpose
Shimane	Canteen/Restaurant at National University
Tokyo	Recycle for waste food and biodegradable plastic cutlery at Company canteen
Mie	Recycle for waste food at park
Yamanashi	Recycle for waste food at hot spring hotel
Kawasaki	Recycle for waste food at elementary school canteen
Kanazawa	Reduce and drying waste mushroom bed
Tokyo	Recycle biodegradable plastic cutlery at theme park
Tottori	Kitchen waste reducing at Hospital
Shimane	Kitchen waste reducing at Elementary School
Hiroshima	Organic Sludge fermenting/decomposing at wastewater treatment facility in the farming village
Shimane	Organic Sludge fermenting/decomposing at wastewater treatment facility in the farming village
Chiba	Reducing Garbage at Food processing plant
Shiga	Reducing Waste from farmland at
Shimane	Composting for garden flower
Vietnam	Reducing waste sludge at Fishery processing plant
Vietnam	Reducing waste sludge at Industrial park

Potential User and Target



Public Sector:

Local Government

- ✓ Transfer point / processing center for Municipal Waste
- ✓ Sewage Treatment Plant



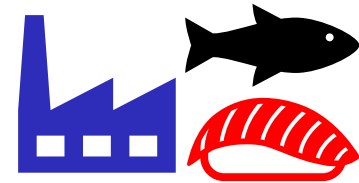
Private Sector:



International
Hotel



Commercial complex
(Restaurant, Super Market...)



Seafood product
processing factory

Schedule (idea)



2022

- Exchange information
- Online based survey

2023

- Field survey in MENA, India
- Supporting by Japanese Government fund

In 2022, Mikuniya is expecting to get information such as ;

- Company / University to collaborate the project
- Treatment fee / Tipping fee for municipal waste, septage
- ESG investment trend in MENA, India

After 2023, Field survey Q1 collecting chip, Q2 Laboratory test
Q3-Q4 Implementing demonstration machine

Contact



For further discussion, please feel free to contact;

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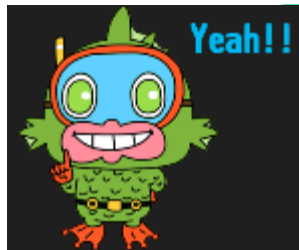
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Mikuniya Corporation



**Harmony of
Ocean and Humanity**
Mr. Mick & Ms. Nier



Looking forward to working together to implement MISHIMAX!