Xin chào

TAIWAN ICDF

TTT

地天泰

Tetanti AgriBiotech Inc.

Earth | Air | Nature | Innovation

Organic Waste Management

SOLution Pro VidER

TTT® Technology

Enzyme Composting

3-hour

Organic Waste to Organic Fertilizer

From soil
Return to earth

地天泰
Tetanti AgriBiotech Inc.

World No.1 1ST CHOICE 世界初! 100%

TTT® Technology

TTT inside

ORGANIC WASTE MANAGEMENT SOLUTION PROVIDER

TURNKEY SOLUTION

AIMZYME

Founder/Inventor:

Dr. Chiu-Chung Young

楊秋忠 博士

Listed in World's Top 2% Scientists

2021, 2022, 2023, 2024

(Stanford University, U.S.A)

Ph. D.

University of Hawaii, Agronomy and Soil Science, U.S.A.

Academician, Academia Sinica

(Highest honored & achievement in scientific research in Taiwan)

National Chair Professor (Lifetime honor)

National Chung Hsing University (www.nchu.edu.tw)

Specialized：

Organic waste treatment

Microbial fertilizer (biofertilizer)

Bioremediations

Interaction between soil and plant

Development of Tetanti

地天泰 Tetanti AgriBiotech Inc.

2018 Company established

2019 Established TTT enzyme production facility (IPs = 24 patents and growing)

"**Top 10 Coolest New-Venture Technology Companies in Taiwan**"

2020 Interviewed by Discovery

https://reurl.cc/kL05a3

2022 "**Emerging Company of the Year**" **(BIOASIA TAIWAN)**

"**Taiwan Circular Economy Award**"

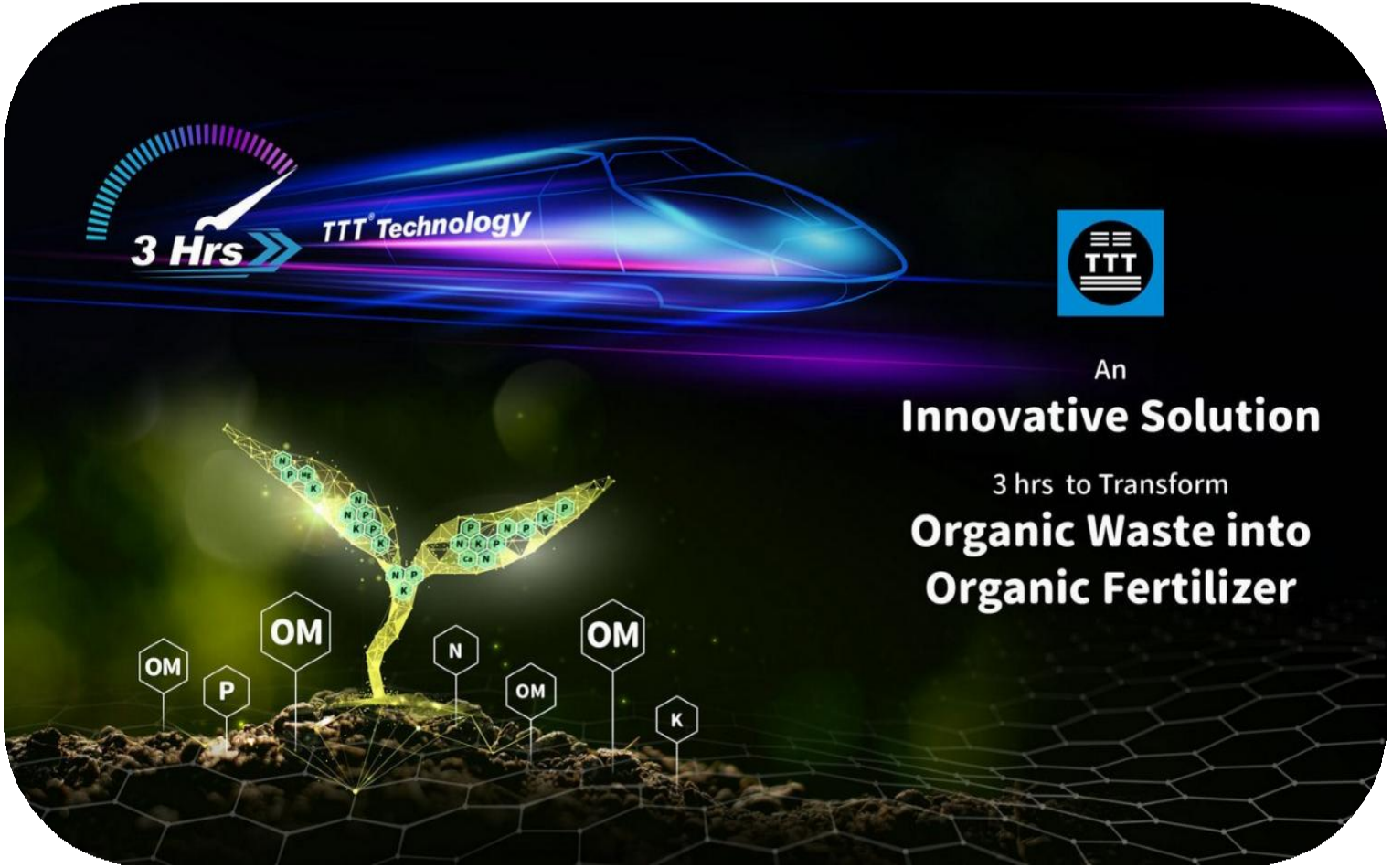
Donated NTD 20 million to **support poor and minority students**

2023 Taoyuan plant awarded "**Industrial Innovation Award**" (Ministry of Economic Affairs)

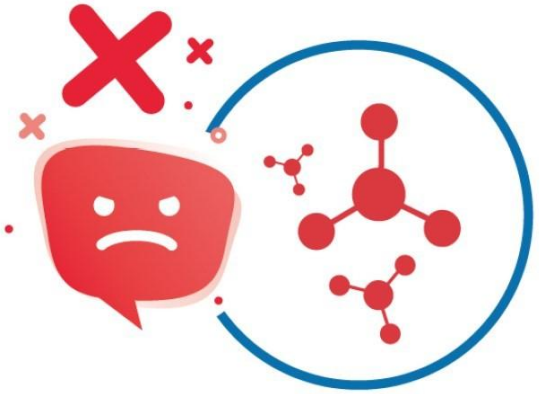
TTT® Technology

Tetanti AgriBiotech Inc.

[Video Link: TTT® Technology: Enzymatic Composting]



TTT® Technology Principle



Toxic matters in organic waste
+ TTT® Enzyme

Enzyme reaction
(degradation, synthesis)

TTT® Enzyme

Enzyme reaction
(transformation, polymerization)

3 hrs

Soluble nutrients
+ Stable organic fertilizer
+ High quality organic fertilizer

Pathogens, insect eggs and grass seeds are mostly exterminated at 80℃.

TTT® Enzyme Product - AIMZYME®

Tetanti AgriBiotech Inc.

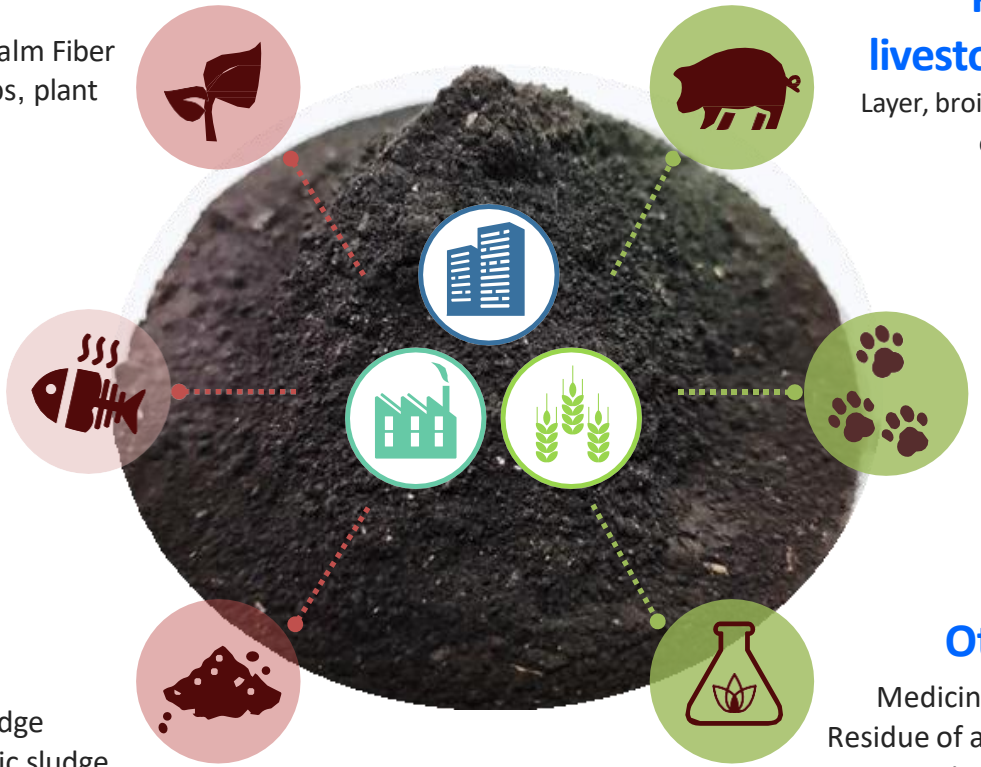
AIMZYME

Plant residue

Straws, husk, green waste, oil Palm Fiber (EFB), wood & mushroom chips, plant meal waste (vinasse)

Poultry/ livestock manure

Layer, broiler, pig, cow/horse/sheep, other manure



Food waste

Vegetable/Fruit
Cooked Food

Animal related

Feather, animal carcasses, organs

Sludge

Alkaline sludge
Neutral and acidic sludge

Others

Medicinal plant residues
Residue of antibiotic production
Liquid fertilizer

Vegetable waste /Cooked food waste

E.g. fruit & vegetable peelings, egg shells / fish, meat, dairy products

Tetanti AgriBiotech Inc.

Before

AIMZYME

TTT® Process

After

Plant residue origin

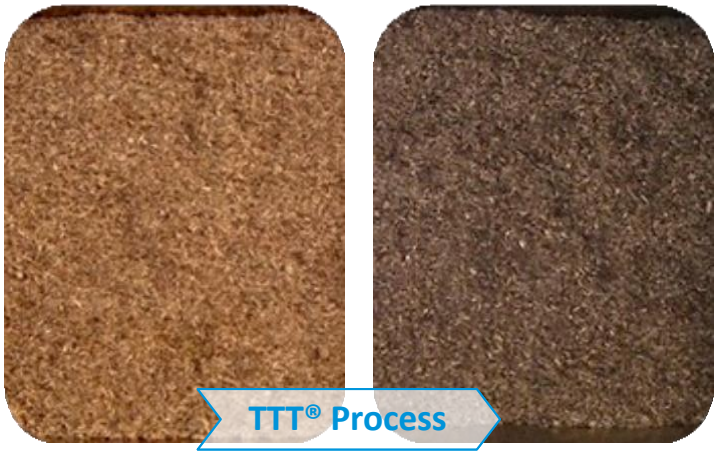
Tetanti AgriBiotech Inc.

TTT inside AIMZYME

Straws

Before After

Tree Trunk

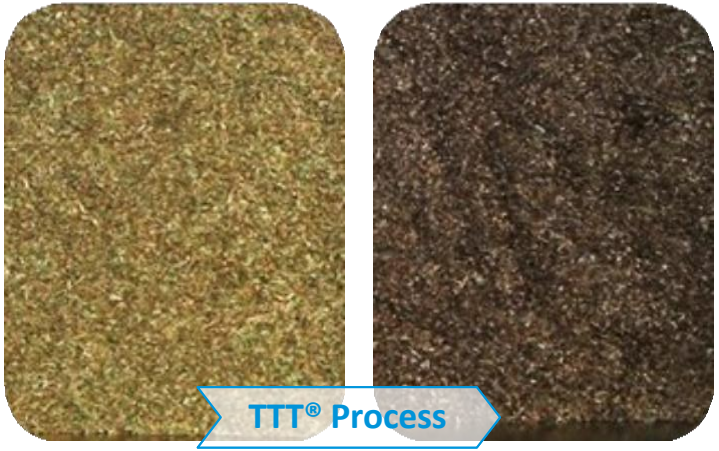


Before After

EFB

Before After

Leaf & Turf Residue



Before After

Poultry/Livestock Manure

Tetanti AgriBiotech Inc.

Before

AIMZYME

TTT®
Process

After

TTT's Business Model

Tetanti AgriBiotech Inc.

Core

TTT® Enzyme Composting Technology 3HRS

Professional factory layout
Plant planning

customized
Enzyme for
Organic wastes

Production optimization
Final product application
Added-value consulting

Total Solution = Circular Economy + ESG + Carbon Credit

Industrial Scale Plant layout

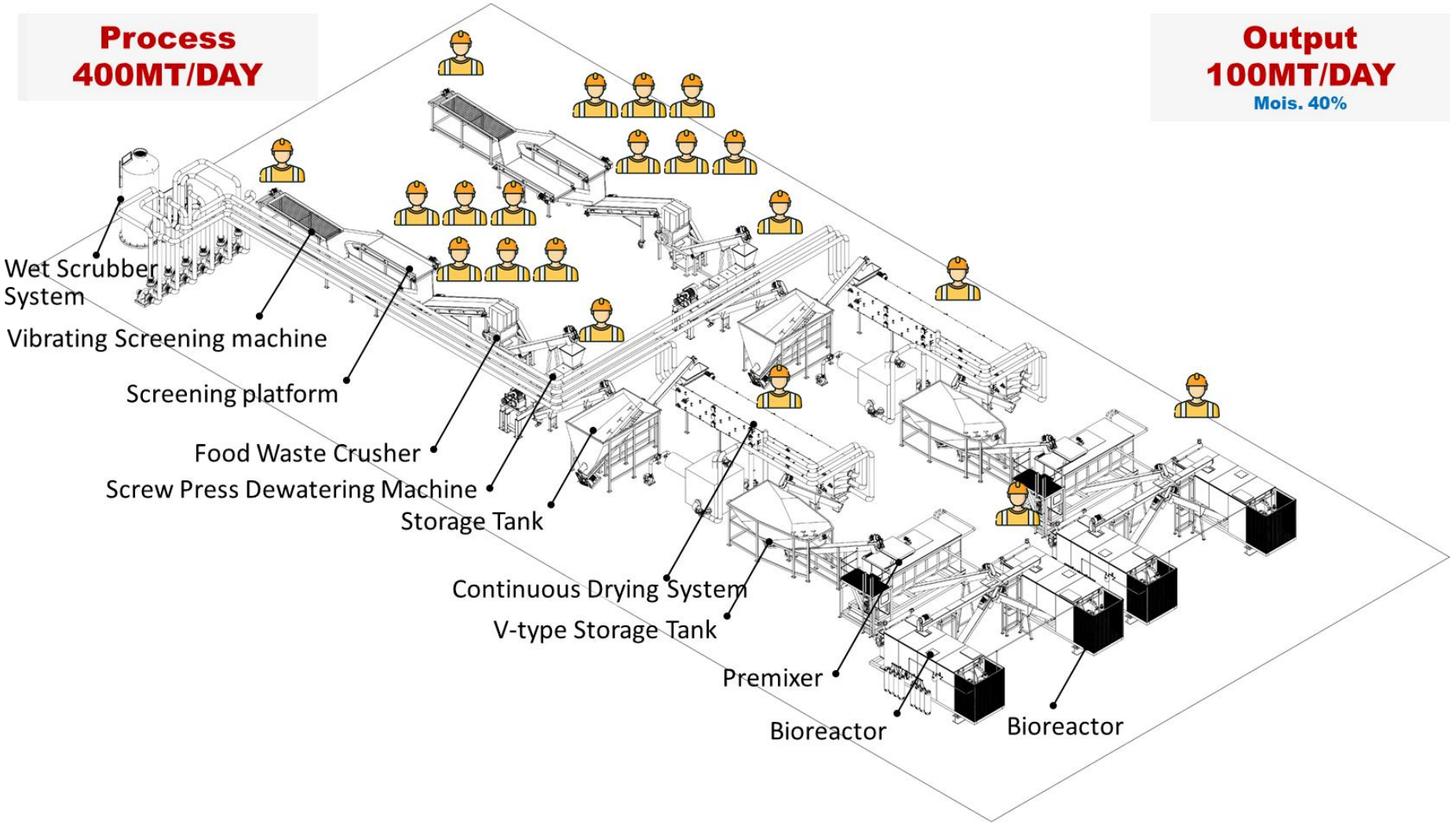
Tetanti AgriBiotech Inc.

Process
400MT/DAY

Output
100MT/DAY
Mois. 40%

TTT inside

AIMZYME



Community-Scale

FOOD WASTE COMPOSTER

TTT enzyme composting is so surreal.

40L/100L/500L/1,000L.

We have models for 4-5,000 people

World No.1 1ST CHOICE 世界初! 100%

Taiwan Circular Economy Award 2022

Taiwan BIO Awards 2022

TTA 10 COOLEST STARTUPS 2019

Suit for Hotel, Food court
Apartment, Compan

Fast process
Complete process within 8~24 hrs
Weight reduction over 80%

Simple operation
One-touch ON & OFF button
Operation timer / Adjustable processing time

Enzyme fertilizer
Rapid enzymatic composting
no need post-maturization

Purify gases
Activated charcoal deodorization
Enzyme odor elimination

enzyme biodegrade within 3-hour MATURIZED **EnzyFert**

地天泰 Tetanti AgriBiotech Inc.
No. 1, Gongyequ 10th Rd., Xitun Dist., Taichung City 40755, Taiwan
T +886-4-23500037 F +886-4-23500337
www.ttt3tops.com

Model	TTT-40	TTT-100	TTT-500	TTT-1000
Process capacity	20 kg	50 kg	250 kg	500 kg
Voltage	110 V	220 V	220V /380 V	380 V
Motor	1/8 HP	1 HP	3 HP	5 HP
Heating system	1,000 W	4,000 W	10,000 W	18,000 W
Moisture removal system	1/30 HP	1/8 HP	1/8 HP	1/8 HP
Equipment weight	122 kg	300 kg	750 kg	1,000 kg
Dimensions (cm)	70*52*102	106*63*112	155*92*160	250*130*170
Material	*SUS 304 casing & agitation paddle*			
Extendable outlet	•	•	•	•
Adjustable base stand	-	•	•	•
Operation timer	•	•	•	•
Safety design	Double layer heat insulation ; Auto-power-off when lid open			

Academician, Academia Sinica
TTT's Founder/Soil Science Expert

Chin-Chung Young

Global Footprint

Americas

USA
Canada
Colombia
Ecuardo
Brazil
Argentina

Europe

Spain
United Kingdom

China

Macau
Hubei
Jiangsu
Sichuan
Gansu
Tianjin

Oceania

Australia
New Zealand

Africa

Namibia
Mali

Southeast Asia

Thailand
Malaysia
Vietnam
Singapore
Philippines
Myanmar

Taiwan

New Taipei City
Taoyuan
Hsinchu
Miaoli
Taichung
Changhua
Yunlin
Kaohsiung
Hualien

16+ Countries
100+ Cases

地天泰
Tetanti AgriBiotech Inc.

Turning Rice Straw into Lasting Eco Solutions

Revitalizing Rice Straw for a Greener Planet

Case Study: Rice Straw to Seedling Substrate

Tetanti AgriBiotech Inc.

Crush to < 10mm

Crush to < 10mm

Enzymatic reaction

Formulation

Replace 30% of raw material

Save 25% cost

Improve product quality

Analysis Report

Tetanti AgriBiotech Inc.

Result：

There is no significant differences in total organic carbon (TOC) between TTT rapid treated rice straw (organic fertilizer) and untreated raw material (Table 1). The result indicated that no carbon loss for TTT rapid treated rice straw.

Table 1. Analysis report of TTT rapid treated rice straw and raw material.

Item	Raw material (rice straw)	TTT treated rice straw (organic fertilizer)
	Dry basis	
Organic matter-OM (%)	90.44±1.0	90.54±0.7
Ash (%)	9.56±1.0	9.7±0.7
Total organic carbon-TOC (%) *	52.45±0.6	52.52±0.4

* TOC(%)=OM(%)/1.724

◆ **TTT Enzymatic process retain the OM mostly.**

National Chung Hsing University
Department of Soil and Environmental Sciences
Laboratory of Soil Biochemistry and Microbiology

The Cycle of Revitalizing Rice Straw with TTT® Technology

Tetanti AgriBiotech Inc.

Consumer goods

Rice farming

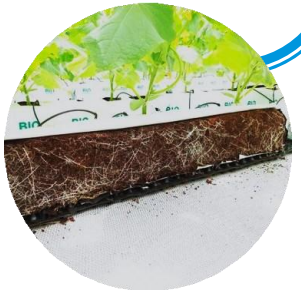
Residue

Rice Straw, husk

Traditional Composting
Burning

TTT® Technology

Crops farming



Cultivation substrate

Ingredient of fertilizer product

Rice seedling substrate

Enzyme treated

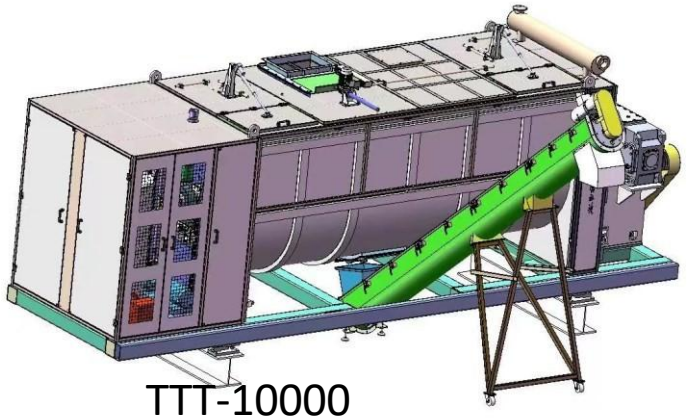
Proposal of Rice straw Trial

2 ha = 4 tons rice straw per season

Daily process capacity 4 batches = 12hrs	**840 KG**	Moist. 50%
Output per day	**790 KG**	Moist. 47%
Electric cost	USD 13.26	156 KW/12hr, 0.085 USD/KW
Enzyme cost	USD 31	2% of input weight 16.8 KG/day 1,900 USD/ton
Operation cost per day	USD 44.26	
Cost per ton	USD 52.69	USD 0.05269/KG
Daily total revenue	USD 117.6	Product wholesale price 140 USD/ton
Daily profit	USD 64.91	
Equipment cost	USD 42,000	
Payback period	**647 days**	
Year profit	**USD 19,473**	300days operation

840KG *300day = 252 tons rice straw

TTT-1000
Capacity:210KG/batch

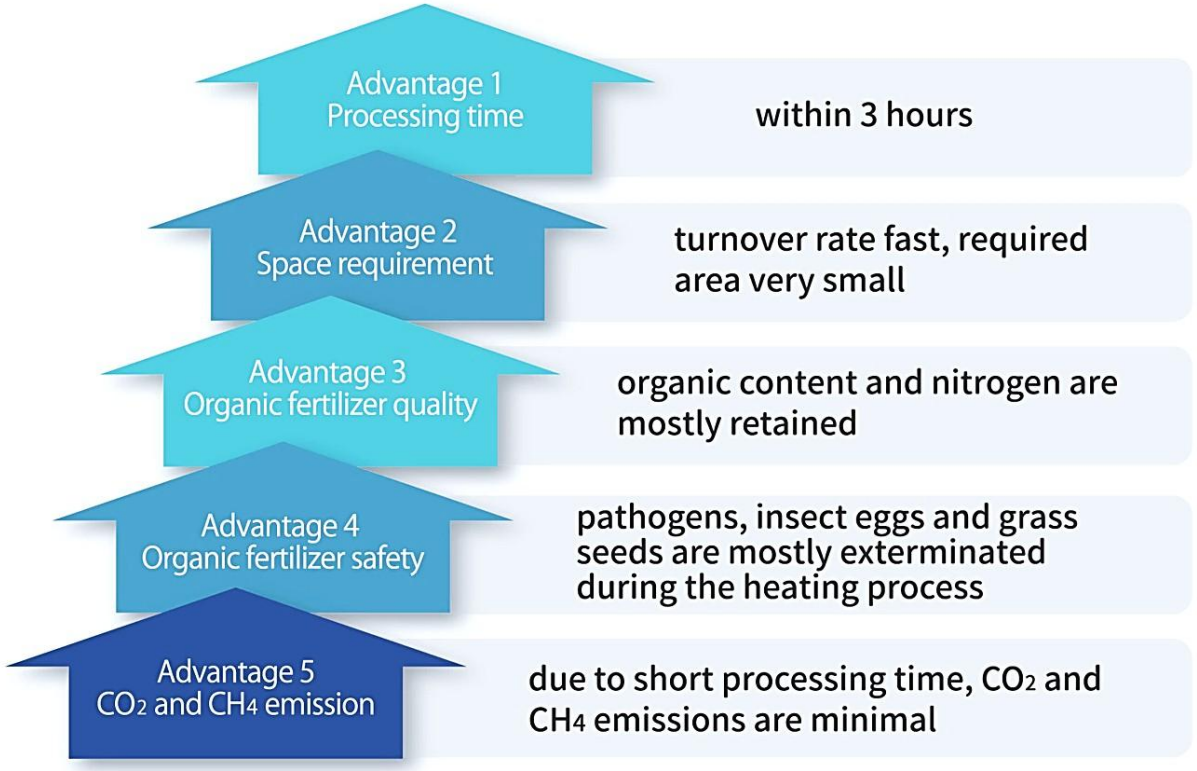


TTT-10000
Max. 5tons per batch

Advantages of TTT® Technology

Tetanti AgriBiotech Inc.

AIMZYME



- Boost up process **60X**
- **Save 90%** Occupied Space
- Increase Capacity **200%**
- **High Quality** Product
- **Carbon** Reduction

Thank You

TTT inside

Global Unique TTT® Technology

Contact Us

地天泰 Tetanti AgriBiotech Inc.

No. 1, Gongyequ 10th Rd., Xitun Dist.,
Taichung City 40755, Taiwan

☎ +886-4-23500037

+886-4-23500337

www.ttt3tops.com