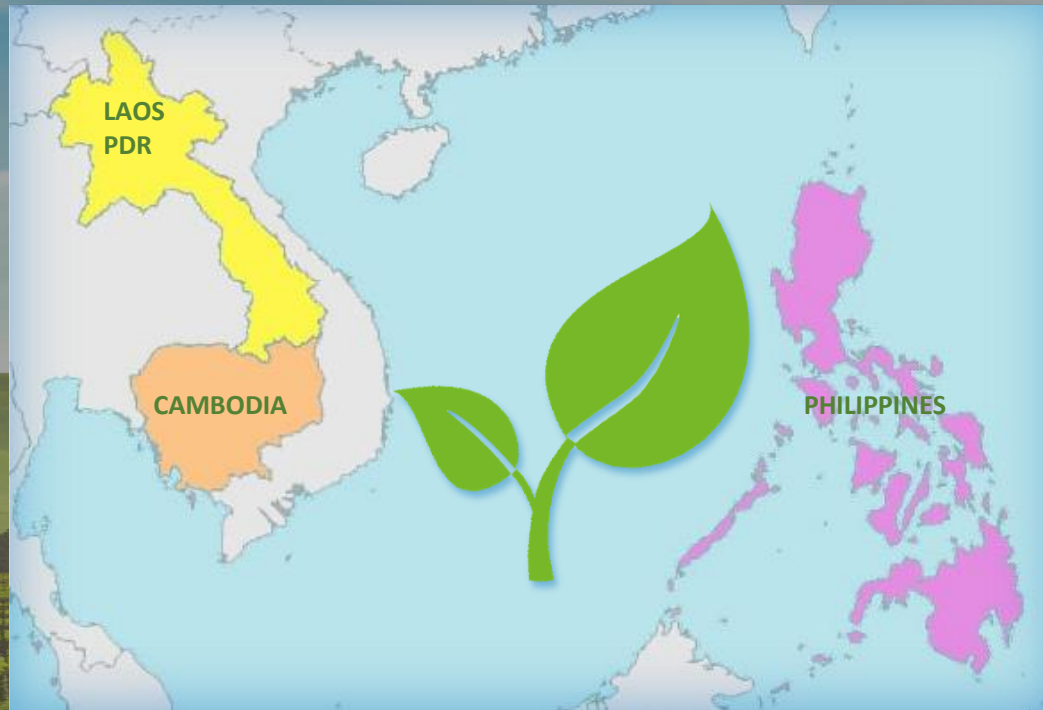




BIOCHAMP



OUR FUTURE IN GREEN

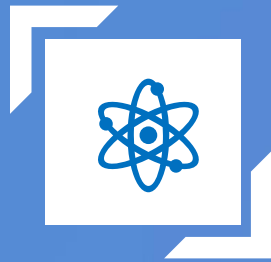
An Introduction to **BIOCHAMP** Pte Ltd



CONTENT



- 01** BIOCHAMP Rapid Thermophilic Digestion System (BRTDS™) Technology Is The Right Solution For The Future
- 02** Our Technology Have Been Proven And Tested In Singapore And Overseas
- 03** Partners In Green



BIOCHAMP Rapid Thermophilic Digestion System (BRTDS™) Technology Is The Right Solution For The Future



BIOCHAMP IS A COMPANY WITH A GREEN MISSION

Our Vision

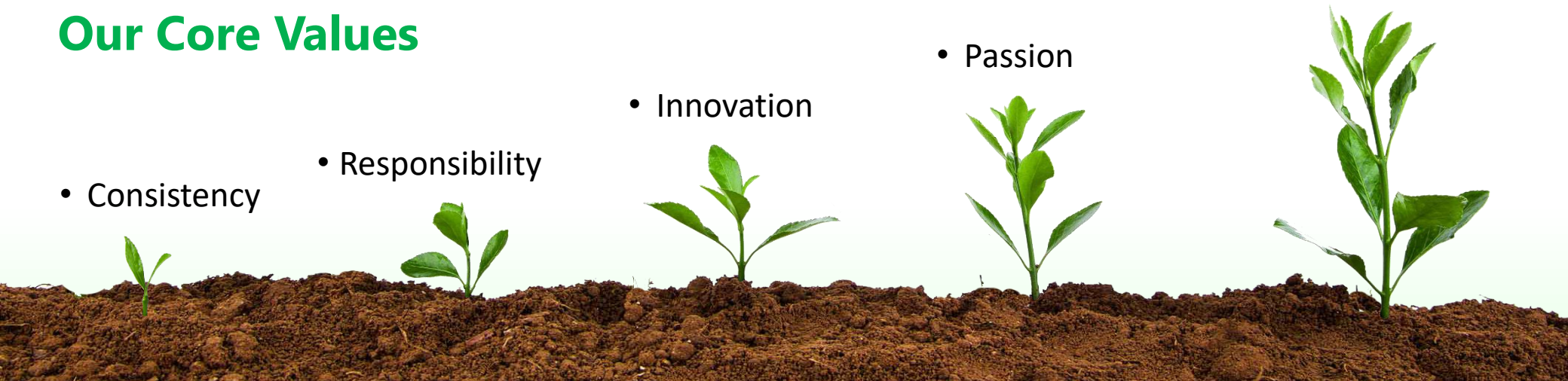
Stewardship of Earth's bio-resources for sustainable development

Our Mission Statement

To be the Champion in providing organic waste-management solutions and services via cutting-edge biotechnology and state-of-the-art project delivery processes.

Our Core Values

- Consistency
- Responsibility
- Innovation
- Passion
- Leadership





WE HAVE A GREEN STORY TO TELL THE WORLD

Our Legacy

- 2003 Company incorporated with core businesses in food manufacturing, trading and distribution of food products;
- 2010 Started initiative to reduce, reuse and recycle food waste;
- 2015 Pioneer to launch full FSC certified, environmentally-friendly tissue and paper product range in Singapore;
- 2017 Pioneer to launch full FSC certified disposal table-ware product range in Singapore;
- 2018 Started business initiative to provide zero-waste solution recognized by FAO by applying BRTDS™ technology to convert organic wastes into fertilizer.
- 2019 Commence International initiative to promote organic waste recycling





ONE SIMPLE SOLUTION FOR ALL APPLICATIONS

Our BRTDS™ technology is versatile and works well for:



Food Producers & Manufacturers

Crop plantations, vegetable farms, animal ranches, vineyards, orchards, poultry hubs, hatcheries, abattoirs, canneries, food factories, food-catering kitchen, etc.



ONE SIMPLE SOLUTION FOR ALL APPLICATIONS



Civic and Commercial Establishments

Markets, Shopping malls, hotels, resorts, theme parks, restaurants, food courts, hospitals, educational institutes, residential developments, etc.



ONE SIMPLE SOLUTION FOR ALL APPLICATIONS



Industrial Establishments

Waste water treatment plants, water reclamation plants, industrial parks, marine vessels and offshore facilities, etc.





OUR SOLUTION – BRTDS™ DIGESTER TECHNOLOGY

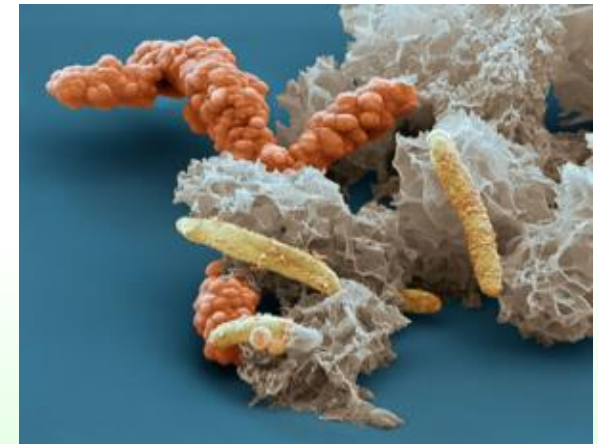
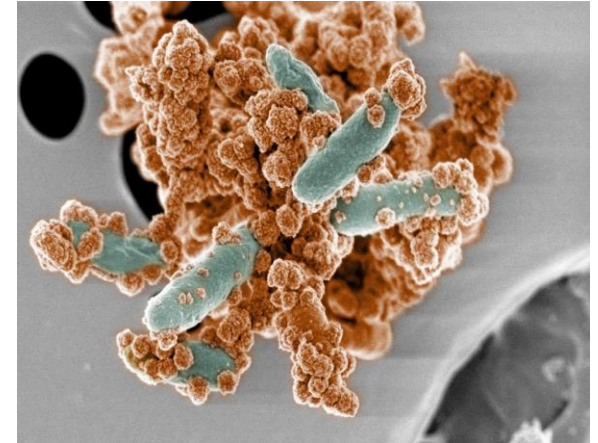
- *BRTDS™* is the acronym for *BIOCHAMP Rapid Thermophilic Digestion System*
- Uses our own patented proprietary HEFA™ enzyme formulation
- Breaks down all kinds of organic waste including proteins, fats, carbohydrates, fibres and pectin using aerobic digestion
- High-heat (60 °C ~ 90°C) , reduces production of odour
- Converts into organic fertilizer within 24 hours
- Conversion rate is 55 - 70% by mass into organic fertilizer, imperative on the characteristics of input material
- Effectively eliminates all forms of pathogens
- Final product is high-grade, odourless, pathogen-free organic fertilizer





OUR USP – BIOCHAMP HEFA™ ENZYME COCKTAIL

- *HEFA™* is the acronym for High-Efficiency Fermentation Agent
- Proprietary cocktail of naturally found enzymes and microbes
- Accelerates the digestion time
- Thermophilic aerobic digestion
- Stable and consistent output



STATE-OF-THE- ART BRTDS™ DIGESTERS

S/No	RTDS™ Digester Model	Maximum Waste Input / Batch-run (KG)	Estimated Minimum Output / Batch-run (KG)	Equipment Material	Dimensions (L x B x H)	Equipment Deaodad, Empty (KG)	Equipment Liveload, Full (KG)	Power Requirements (Voltage VAC)	Power Consumption / Batch-run (kWh)	Enzyme Use / Batch-run (KG)
1	RD-Nano	50	28	304 S/S	1230 x 750 x 1200	150	200	415V, 3phase, 50Hz	13	0.05
2	RD-Mini	100	55	304 S/S	1500 x 750 x 1300	250	350	415V, 3phase, 50Hz	26	0.10
3	RD-Small	300	165	304 S/S	2000 x 1200 x 1500	450	750	415V, 3phase, 50Hz	72	0.30
4	RD-Medium	500	275	304 S/S	2500 x 1400 x 1800	750	1,250	415V, 3phase, 50Hz	120	0.50
5	RD-Large	1,000	550	304 S/S and Iron	3000 x 1700 x 2200	2,000	3,000	415V, 3phase, 50Hz	220	1.00
6	RD-X-Large	2,000	1,100	304 S/S and Iron	4200 x 1900 x 2800	4,000	6,000	415V, 3phase, 50Hz	385	2.00
7	RD-Jumbo	5,000	2,750	304 S/S and Iron	5500 x 2000 x 3200	7,500	12,500	415V, 3phase, 50Hz	825	5.00
8	RD-Giant	10,000	5,500	304 S/S and Iron	6000 x 2100 x 3500	10,000	20,000	415V, 3phase, 50Hz	1,540	10.00
9	RD-Mammoth	15,000	8,250	304 S/S and Iron	7500 x 2200 x 3500	13,000	28,000	415V, 3phase, 50Hz	2,310	15.00
10	RD-Goliath	20,000	11,000	304 S/S and Iron	9500 x 2200 x 3500	20,000	40,000	415V, 3phase, 50Hz	3,080	20.00
11	RD-Monument	25,000	13,750	304 S/S and Iron	11000 x 2200 x 3500	25,000	50,000	415V, 3phase, 50Hz	3,850	25.00

- We offer a range of digester capacities to fit the customers' recycling needs



BENEFITS :

- ENVIRONMENTAL
- FINANCIAL
- SOCIAL / MORAL





BENEFITS : ENVIRONMENTAL

- Completing the food cycle
 - no more organic waste goes to landfill / incinerator
- Reduction of harmful emission from transportation of organic waste to landfill / incinerator
- No public odour nuisance nor harmful emission in the vicinity
- Clean, odourless and pest-free bin-centres
- Reduction of use of plastic bags for organic waste collection and storage
- Resulting in a cleaner, and greener living environment for everyone



BENEFITS : ECONOMICS

- Reduction in waste disposal and transportation cost
- Automated system reduces manpower cost for waste disposal
- Cost-saving from reduction in use of plastic bags for waste collection and storage
- Pest-control cost-saving since onsite organic waste storage is unnecessary
- Maintenance cost-saving by newly available organic fertilizer for landscaping use
- New revenue stream from sale of organic fertilizer
- Lower overall operating cost for property owner





BENEFITS : MORAL / SOCIAL

- Environmental Corporate Social Responsibility recognition for property owner
- Singapore BCA Green Mark credit attribution for property owner
- USGBC LEED Platinum credit attribution for property owner
- Moral obligation fulfilled to ensure a sustainable, green environment for us, our children and future generations



HOW DOES BRTDS™ WORKS?

STEP ONE

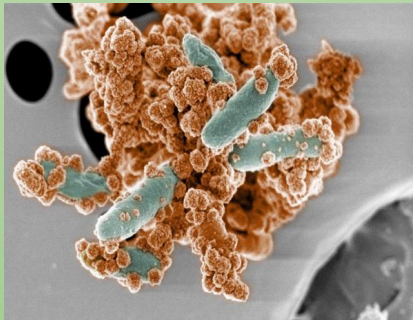
- Input all kinds of organic waste, including food scraps, bones, shells, durian husks, oil, animal carcass, bio-degradable bags, cardboard box, newspapers, sludge, etc.
- BUT No plastic, metal, glass or stones



HOW DOES BRTDS™ WORKS?

STEP TWO

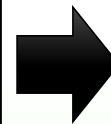
- Add BIOCHAMP HEFA™ Enzyme Cocktail
- Add supplementary organic biomass, eg. sawdust, woodchip, etc. (if necessary)



BIOCHAMP
HEFA™ Enzyme



supplementary biomass
(if necessary)



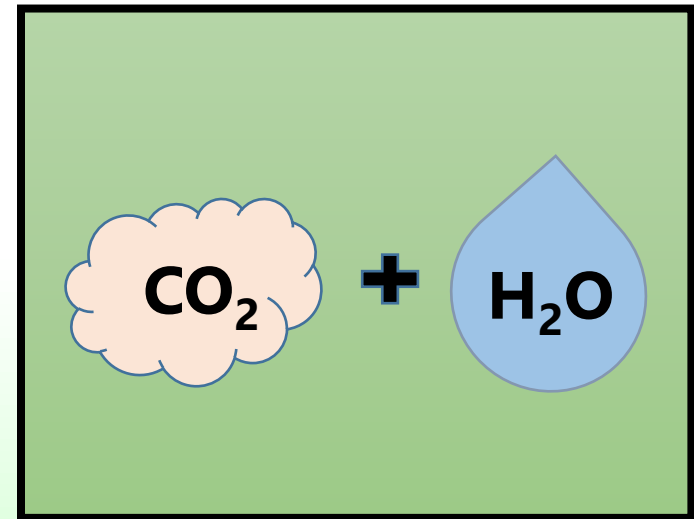
HOW DOES BRTDS™ WORKS?

STEP THREE

- Turn on BRTDS™ Digester for 24 hours
- Starting mixture before conversion usually contains about 40-50% moisture
- No harmful by-products (water vapour & carbon dioxide) during conversion
- No foul smell during the conversion process



**24 Hours**



HOW DOES BRTDS™ WORKS?

STEP FOUR

- Input material is converted to organic fertilizer at a ratio of 55-70% by mass
- Organic fertilizer is odourless and free of pathogens
- Ready to be packed for use or sale after cooling down



**24 Hours**

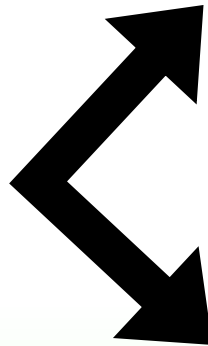




HOW DOES BRTDS™ WORKS?

STEP FIVE

- Organic fertilizer produced can be used directly in agriculture production and landscape gardening or sold for profit





OUR ORGANIC FERTILIZER IS 100% NATURAL

Characteristic of our Organic Fertilizer

- Crop 100% pure & environmentally friendly natural fertilizer
- Weed-free
- No harmful pathogens
- No offensive odour
- Enhances soil fertility
- Rejuvenate soil ecosystem
- Improve water retention
- Efficient reduction of nutrient leachate





**Our Technology Have Been
Proven And Tested In Singapore
And Overseas**

APPLICATION OF BRTDS™ TECHNOLOGY

S/No	Client Site	Location	Capacity (KG/Day)	Waste-type
1	Yishun Primary School	Singapore	25	Food waste
2	Nanyang Girls' High School	Singapore	25	Food waste
3	Shanghai Tunnel Staff Canteen	Singapore	50	Food waste
4	Courtyard by Marriott Novena	Singapore	1,000	Food waste
5	Crowne Plaza, Terminal 3, Changi International Airport	Singapore	1,000	Food waste
6	CAG Terminal 4, Restaurants, 10 units	Singapore	50 x 10	Food waste
7	DNB Pig Farm	Sichuan, China	25,000	Pig manure and waste
8	Aodeng Pig Farm	Hubei, China	20,000	Pig manure and waste
9	Zhengqiang Poultry Farm	Anhui, China	50,000	Poultry manure and waste
10	Defon Canteen	Hubei, China	2,000	Food waste
11	One Utama Shopping Centre	KL, Malaysia	2,000	Food waste
12	Food Processing Factory	Thailand	2,000	Food waste





APPLICATION OF BRTDS™ TECHNOLOGY

YISHUN PRIMARY SCHOOL | SINGAPORE

- Treats food waste at 25KG per day





APPLICATION OF BRTDS™ TECHNOLOGY

NANYANG GIRLS' HIGH SCHOOL | SINGAPORE

- Treats food waste at 25KG per day



APPLICATION OF BRTDS™ TECHNOLOGY

COURTYARD BY MARRIOTT | NOVENA, SINGAPORE

- Treats food waste at 1,000KG per day (converts to liquid nutrient)





APPLICATION OF BRTDS™ TECHNOLOGY

CROWNE PLAZA AT CHANGI INTERNATIONAL AIRPORT T3 | SINGAPORE

- Treats food waste at 1,000KG per day, (converts to liquid nutrient)





APPLICATION OF BRTDS™ TECHNOLOGY

RESTAURANTS @ CHANGI INTERNATIONAL AIRPORT T4 | SINGAPORE

- Treats food waste at 500KG per day (converts to liquid nutrient)



APPLICATION OF BRTDS™ TECHNOLOGY

DNB PIG FARM | SICHUAN, CHINA

- Treats pig manure & waste at 25,000KG per day





APPLICATION OF BRTDS™ TECHNOLOGY

AODENG PIG FARM | HUBEI, CHINA

- Treats pig manure & waste at 20,000KG per day





APPLICATION OF BRTDS™ TECHNOLOGY

TONGLING HATCHERY & EGG FARM | ANHUI, CHINA

- Treats poultry waste at 50,000KG per day





APPLICATION OF BRTDS™ TECHNOLOGY

ONE UTAMA SHOPPING MALL | KL, MALAYSIA

- Treats food waste at 2,000KG per day





APPLICATION OF BRTDS™ TECHNOLOGY

THAI-NIPPON FOOD FACTORY | THAILAND

- Treats industrial food waste at 2,000KG per day





ADVANTAGES OF BRTDS™ TECHNOLOGY

- Treat and convert any organic wastes into organic fertilizer within 24 hrs
- Can mix and treat any organic wastes including tissue papers, card boards, banana peels, chicken bones
- The product i.e. organic fertilizer is free of offensive smell and harmful pathogens, wild seeds, pests and pest eggs
- The product is rich in nutrients essential for plant growth
- Batch production to ensure consistency of output
- The product has been certified by the Australian Organic Body, Eco Cert (EC, US and Japan) and Singapore Food & Veterinary Authority as truly organic fertilizer





ADVANTAGES OF BRTDS™ TECHNOLOGY

BIOCHAMP organic fertilizer improves the soil condition and produces better and higher crop yield.





Partners In Green



OUR LIST OF PARTNERS IN GREEN IS GROWING



BIOCHAMP is ready to make a greener
world today and tomorrow with you!

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