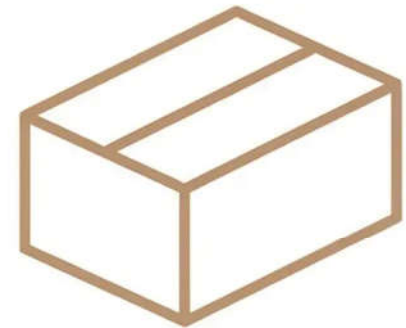


Turning Rice Paddy Waste into Packaging without chemicals

Presenter: SynerTechcare Australia Pty Ltd



The Problem: Rice Paddy Burning Crisis



731M

metric tons of rice straw produced
globally per year

~70%

burned in fields

1.1 to 1.7MT

of CO₂ releases while burning 1MT of
paddy straw

Why Current Solutions Don't Work

Previous Attempts



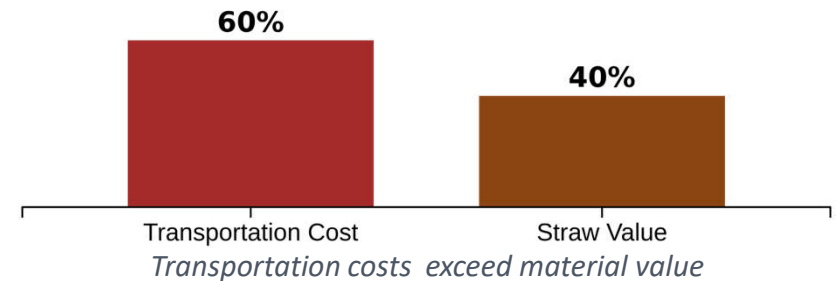
Previous fiber-to-paper conversion attempts have **failed** to establish viable commercial processes

Sodium Hydroxide Requirement



Highly alkaline pose water pollution risks

Economic Barrier



Our Innovative Solutions



Compact Brick Formation

- ✓ Compacts paddy straw & husk into bricks
- ✓ Reduces storage space required
- ✓ Lowers logistics costs



Proprietary Process

- ✓ Chemical-free pulp production
- ✓ Eliminates sodium hydroxide
- ✓ Reduces environmental impact

Brick Formation Process



At the Farm



Straw converted to bricks



Straw bricks
90% less volume



Straw bricks are transported to our factory



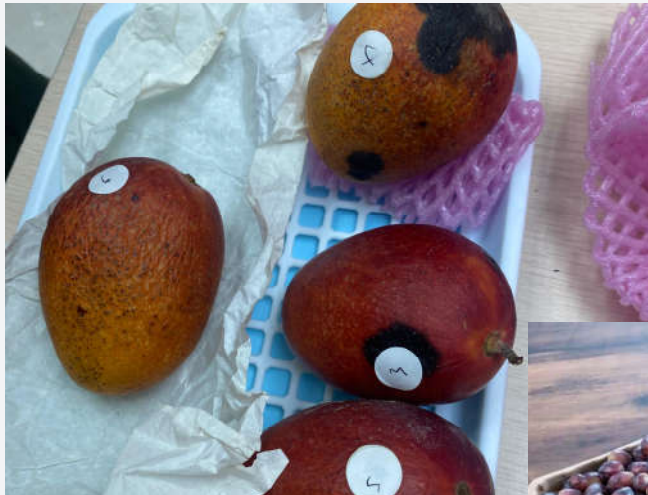
Pulp

Transforming agricultural waste into compact bricks

Ionic Product Portfolio

 Complete range of sustainable packaging solutions developed since 2020

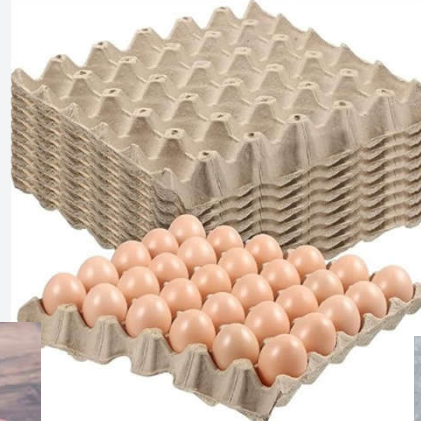
2020



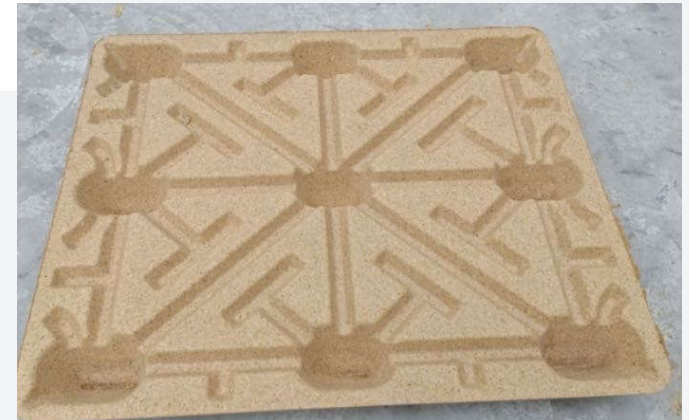
2021



2022



Present



Real-World Applications



Ionic Wrap Application

Protective wrapping for fruits during harvest



Key Benefits

Reduces fruit loss by creating protective barrier



Sanwo Test Results

Proven effectiveness in reducing post-harvest losses



Fruit Harvest Loss Reduction

Original Method



With Ionic Wrap



Significant reduction in post-harvest losses

Patents & Certifications

SGS

Test Report SL92109299773701FW Date: August 20, 2021 Page 4 of 6

Test Item: Composition Analysis
 Sample Description: Mask
 Test Method:
 Fourier Transform Infrared Spectrometer (FTIR)
 Pyrolysis-Gas Chromatography Mass Spectrometry (PGC-MS)
 Energy dispersive X-ray fluorescence spectrometer (EDX)
 Differential Scanning Calorimeter (DSC)
 Thermogravimetric Analyzer (TGA)

Test Result:

No.	Composition	Content, Wt%
1	Poly(lactic acid) (PLA)	>99

intertek
 Total Quality Assurance

Number: HKGT05354927-52

TEST REPORT

Tests Conducted (As Requested By The Applicant)

- Test Method For Antibacterial Finishes On Textile Materials (Quantitative):

Test Method: American Association of Textile Chemists and Colorists (AATCC) Technical Manual, Test Method 100-2019.

Ultraviolet Sterilization Of Sample Before Test:

Test Culture: Staphylococcus Aureus (ATCC 6538)

Klebsiella Pneumoniae (ATCC 4352)

Inoculum Suspension Medium: 120 Nutrient Broth With 0.05% Triton X-100

Inoculum Concentration: 1-3 x 10⁸ CFU/mL

Test Specimen: 1.0 g (30 Pieces Of Circular Swatches 4.8 cm In Diameter) And Apply 1 ml.

Inoculum Per Trial: Inoculum Per Trial

Neutralizing Solution: Lethen Broth

Contact Time: 24 hours

Incubation Temperature: 37°C

Incubation Period: 48 hours

Agar Medium: Nutrient Agar

Result:

Test Microorganism	Percent Reduction of Bacteria (%)
Staphylococcus Aureus	99.9
Klebsiella Pneumoniae	99.9

Reference Ratio: % Reduction Anti-bacterial activity

Test Report No.T32120310169SN Date: Nov 05, 2021 Page 3 of 6

Result 1 Bacterial filtration efficiency ASTM F2101-19

Test Side : Inside
 Pre-Conditioning : Minimum of 4 hours at 21±5°C and 85±5% R.H.
 Dimensions of test specimen : 176 mm x 94 mm
 BFE Test Area : 49 cm²
 BFE Flow Rate : 28.3 l/min
 Test bacteria : Staphylococcus aureus ATCC 6538
 Mean Particle Size : 2.8 µm
 Positive Control Average : 2.3 x 10³ CFU
 Negative Monitor Count : 41 CFU

Test Specimen	Percent BFE (%)
1	99.9
2	99.9
3	99.9
4	99.9
5	99.9

Note: Plate count total for each stage can be provided upon request.

Result 2 Differential pressure EN14683:2019+AC:2019 Appendix C

Test Side : Inside
 Pre-Conditioning : Minimum of 4 hours at 21±5°C and 85±5% R.H.
 Test Area : 4.9 cm²
 Flow Rate : 8 l/min

Test Location	ΔP (mm H ₂ O/cm ²)				
	Specimen 1	Specimen 2	Specimen 3	Specimen 4	Specimen 5
Top Centre	3.3	4.1	4.3	4.3	3.9
Centre	3.8	4.0	4.1	4.2	4.2
Bottom Centre	4.0	4.2	4.3	3.9	3.6
Centre Left	3.8	4.6	3.8	5.0	3.9
Centre Right	3.7	4.6	3.8	3.8	3.8
Average	3.7	4.3	4.1	4.2	3.9

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200433
 上海市国定路 335 号 5022 室 上海光华专利事务所 (普通合伙)
 金彦 (021-51096606) 许亦琳 (021-51096606-829)

发文日:
 2022 年 03 月 15 日

申请号或专利号: 202210101729.2 发文序号: 2022031000754690

申请人或专利权人: 郑熙东

发明创造名称: 一种复合纤维布、制备方法和用途以及纤维布产品

发明专利申请初步审查合格通知书

上述专利申请, 经初步审查, 符合专利法实施细则第 44 条的规定, 根据专利法第 34 条的规定, 专利申请自申请日起满十八个月即行公布。

初步审查合格的上述发明专利申请是以:
 2022 年 1 月 27 日提交的说明书摘要;
 2022 年 1 月 27 日提交的权利要求书;
 2022 年 1 月 27 日提交的说明书;
 2022 年 1 月 27 日提交的说明书附图
 为基础的。

提示:
 1. 发明专利申请人可以自申请日起 3 年内提交实质审查请求书, 缴纳实质审查费, 申请人期满未提交实质审查请求书或者期满未缴纳或未足额缴纳实质审查费的, 该申请被视为撤回。
 2. 专利费用可以通过网上缴费, 邮局或银行汇款缴纳, 也可以到国家知识产权局缴纳。
 网上缴费: 电子申请注册用户可登陆 <http://cponline.cnipa.gov.cn>, 并依照相关要求使用网上缴费系统缴纳。
 邮局汇款: 收款人姓名: 国家知识产权局专利局收费处, 商户客户号: 110000860。
 银行汇款: 开户银行: 中信银行北京知春路支行, 户名: 国家知识产权局专利局, 账号: 7111710182600100032。
 汇款时应当准确写明申请号、费用名称 (或简称) 及分项金额, 未写明申请号和费用名称 (或简称) 的视为未办理缴费手续。
 了解更多信息及要求, 请登陆 <http://www.cnipa.gov.cn> 查询。

审查员: 董辉 审查部门: 专利局初审及流程管理部

联系电话: 010-62089632

210304 纸件申请, 回函请寄: 100088 北京市海淀区蓟门桥西土城路 9 号 国家知识产权局受理处
 2019.4 电子申请, 应当通过电子专利申请系统以电子文件形式提交相关文件。除另有规定外, 以纸件等其他形式提交的文件视为未提交。

Strategic Partnerships

Key partnerships enabling our sustainable packaging initiative



Cooperative Partners



Governmental Support



Production Strategy



Strategic Relocation

Moving production from Hong Kong to Vietnam



Production Line Setup

Optimized manufacturing in Vietnam

Relocation Visualization

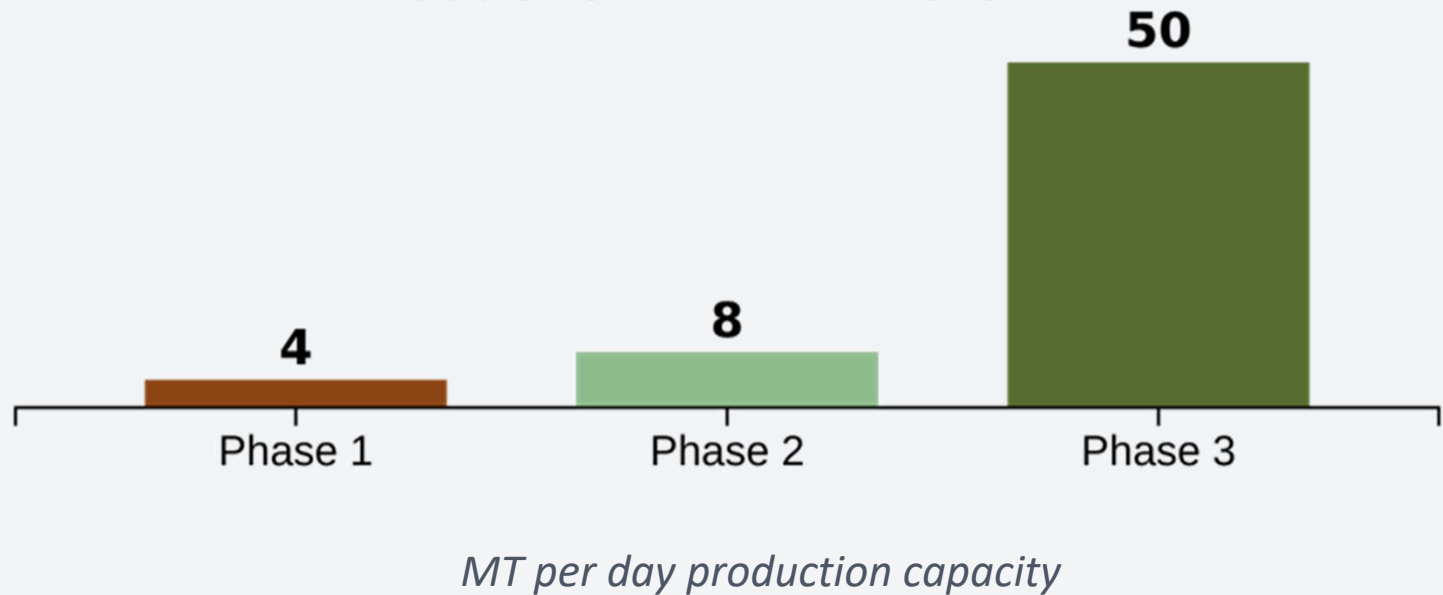


Optimized production with reduced costs

- Lower operational costs
- Access to raw materials
- Manufacturing expertise

Three-Phase Expansion Plan

Production Capacity Growth



 **Phase 1**

4 MT per day
1000 MT per year
Focus on strawberry packaging

 **Phase 2**

8 MT per day
2400 MT per year
Focus on export cartons

 **Phase 3**

50 MT per day
12000 MT per year
One-time lunch boxes & utensils

Transforming Agriculture & Packaging

Wood costs roughly

\$408 per ton

Based on CME lumber futures contracts

vs

Paddy straw costs

\$12 to \$65 per ton,

heavily dependent on collection/transport distance



Key Impact

- Reduces fruit harvest loss
- Creates sustainable packaging solutions
- Provides economic alternative to burning
- Cost effective alternative to wood pulp