



MO MO SUN

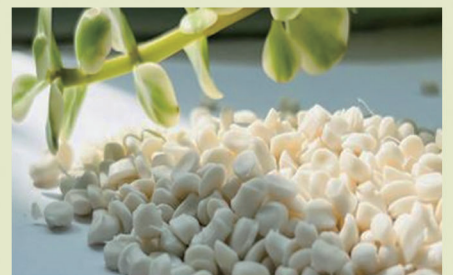
Raw Material Catalog





Introduction

MO MO SUN INTERNATIONAL CO., LTD. is dedicated to the research and development of biodegradable materials. The company states that its products naturally biodegrade in soil at ambient temperatures into water, carbon dioxide, and organic and inorganic matter, without requiring recycling. Its materials are described as meeting home-composting criteria, including 90% biodegradation within 360 days, 90% disintegration within 180 days, no phytotoxicity, and compliance with heavy-metal limits. These properties are intended to reduce the environmental impact of persistent conventional plastics and microplastics. After use, the materials are designed to return to the earth, supporting the replacement and reduction of conventional non-biodegradable plastics.



Our Vision & Certifications



- ✓ DIN CERTCO Home Compostability Certification
- ✓ DIN CERTCO Industrial Compostability Certification
- ✓ Australian ABA Compostability Certification
- ✓ U.S. BPI Compostability Certification



Australian ABA
Compostability
Certification



U.S. BPI
Compostability
Certification



DIN CERTCO Industrial
Compostability
Certification



DIN CERTCO Home
Compostability
Certification

Natural Carbon Sinks

Earth's major natural carbon reservoirs: forests, oceans, and soils



Yellow Carbon — Soil Carbon Sinks:

Through photosynthesis, plants capture CO₂ from the atmosphere. Approximately 42% is stored in above-ground branches, while another 50% is stored in plant roots and soil.



Green Carbon — Forest Carbon Sinks:

Plants absorb atmospheric CO₂ through photosynthesis. Approximately 4 kg of CO₂ is converted into 1 kg of wood, with the carbon stored in plant biomass.

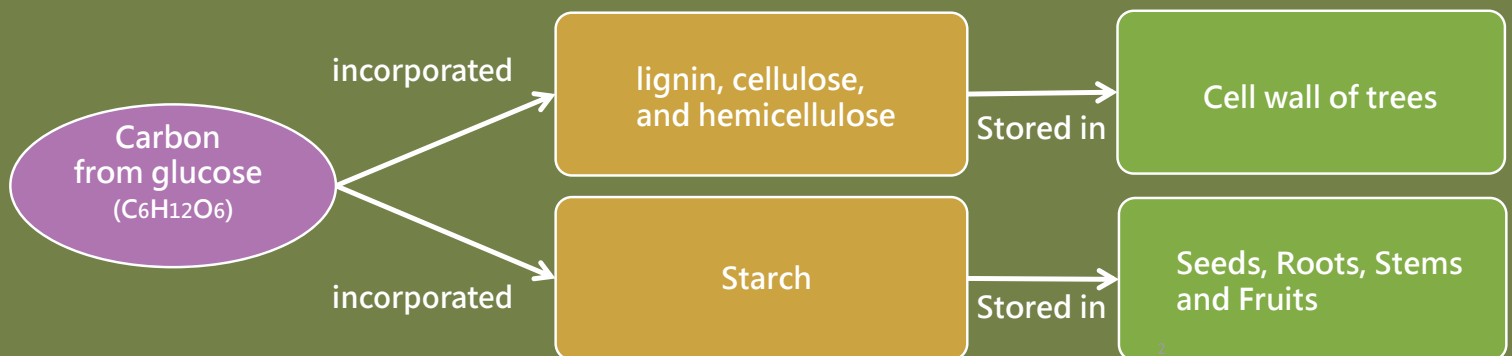
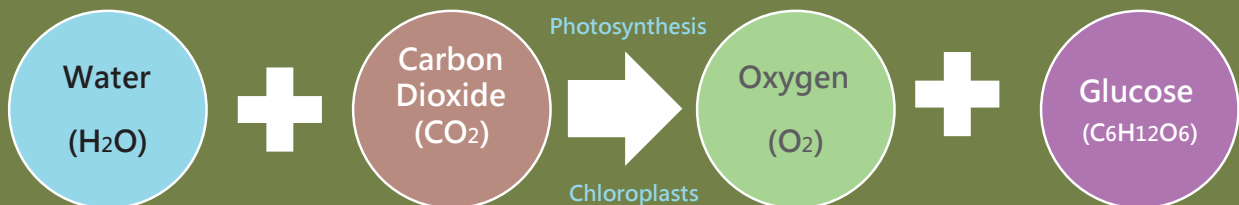


Blue Carbon — Ocean Carbon Sinks:

Approximately 88% of the carbon absorbed by mangrove forests is stored in sediments at depths of up to 3 meters.

The Carbon-Reduction Role of Photosynthesis:

Plants absorb carbon dioxide (CO₂) from the atmosphere and incorporate its carbon into glucose (C₆H₁₂O₆). This carbon can then be stored in plant biomass, including in the form of polysaccharides.

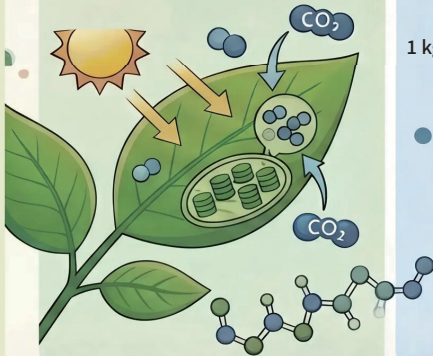


Carbon-negative Story Card: Rice Husk / Tea Stem Biomaster Pellets

Atmospheric Carbon Sequestration Technology — Through the photosynthetic alchemy of chloroplasts, converting atmospheric CO₂ into carbon-negative assets

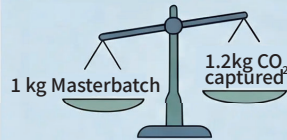
01 Scientific Principle

- Chloroplast Photosynthetic Alchemy: A natural carbon capture mechanism that locks atmospheric CO₂ in biomass materials to create carbon-negative assets

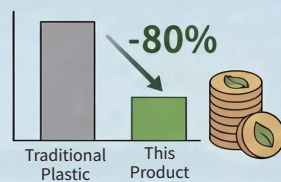


02 ESG Metrics

- Carbon Sequestration Contribution: Each kilogram of masterbatch sequesters 1.2kg of CO₂



- Carbon Reduction Performance: 80% less carbon emission compared with traditional plastics



03 Expert Tips

- Visual & Tactile: Natural Fiber Texture



- Processing Flexibility: Suitable for Injection Molding / Extrusion / Blow Film



- Brand Marketing: ESG Story Added Value



04 End of Life

- Induced Biodegradation: Degradable in natural environments



- Yellow Carbon Restoration: Returns to soil and nourishes the next carbon cycle



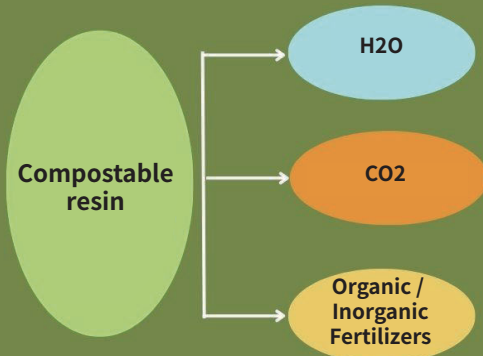
Eco-Friendly Biodegradable Composite Material Research & Development

Agricultural residues replace traditional plastics.

Plant fibers are natural polymers composed of cellulose, hemicellulose, and lignin.

Natural Decomposition

Agricultural Plant Fiber Composite Material



Forest Carbon Sink:
1 hectare absorbs
200 tons of CO₂

Carry out photosynthesis
and absorb CO₂

**Build agricultural carbon rights
management strategies**
**Realize recycling of agricultural
residual resources**

**Agri-food production
residual materials
(plant fibers)**

Processing

Piling

Drying

Grinding

Granulation

R/D

Compounding

Production

**Injection
Molding**

Extrusion

Blow Film

Product

Consumer Usage

**Plant Fiber Products
Disposal and Landfill**

**42% CO₂ Storage
Above-ground
Plant Biomass**

**50% CO₂ Storage
Roots and Soil**

**Soil Carbon Sink
Soil Organic Carbon
(SOC) Storage**

**Microbial
Decomposition
Humification**

**Microbial
Biomass Carbon**

**Soil Non-humus
Organic Carbon**

**Soil Humus
Organic Carbon**

Research and Development of Eco-friendly Materials for Sustainable Earth Development

**Mitigate Greenhouse Effect | Reduce Reliance on Petroleum-derived Raw Materials |
Address Difficulties in Recycling Conventional Plastic Waste**

**At present, eco-friendly materials around
the world are divided into 3 categories**

Category 1
Conventional Plastics
(Non-degradable)
(Recycle...)

Partially or fully replace
virgin materials with
recycled materials for
product manufacturing
to reduce resource
consumption.

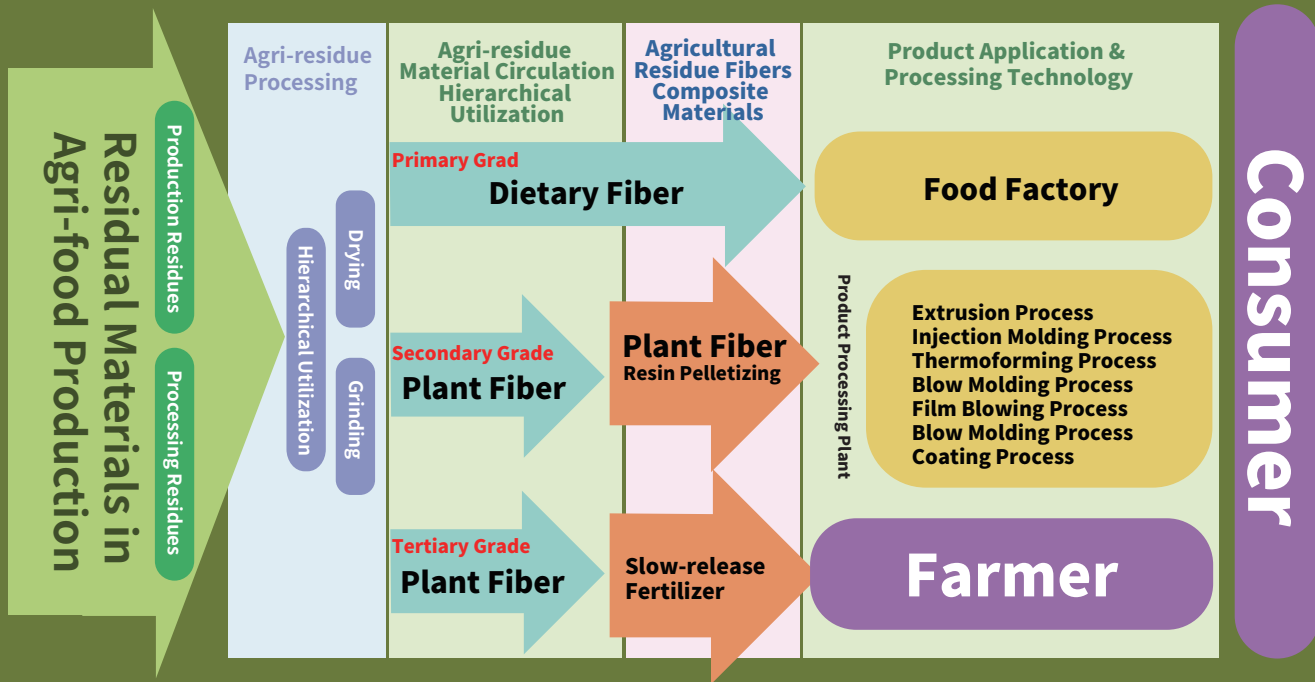
Category 2
Bioplastics
(Non-degradable)
(Bio-based)

Biomass is used as raw
material for synthetic
plastics. Such alterna-
tive materials are known
as bio-based plastics.

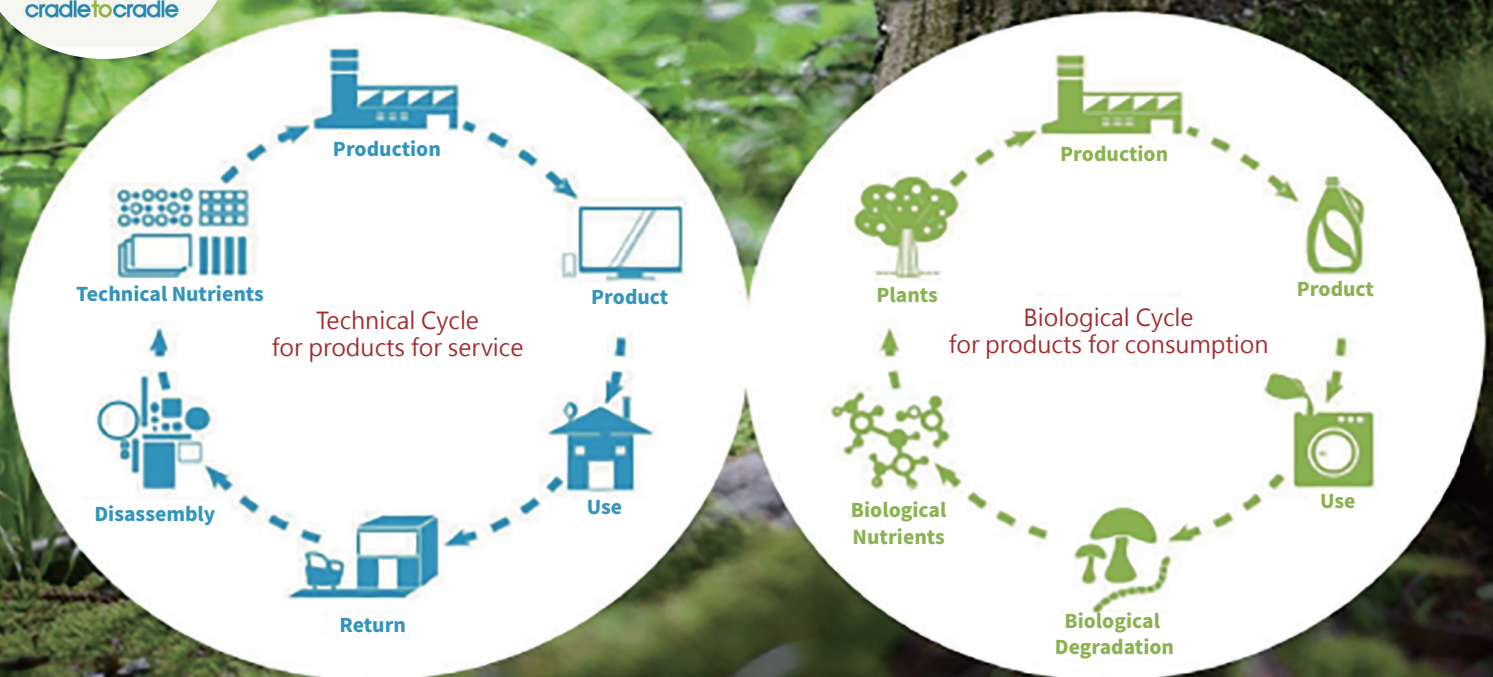
Category 3
Biodegradable Resin
(Compostable resin)

It can return to the
natural cycle after being
decomposed by microor-
ganisms, also known as
compostable resin.

Operating Specification for Agricultural ESG & Natural Carbon Sink Development



Ecological Cycle



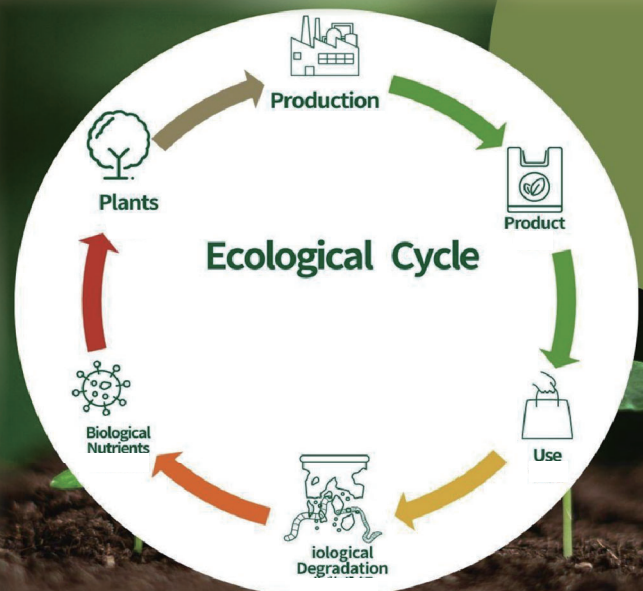
Photosynthesis Ecological Cycle

Waste Equals Food

Nutrients become nutrients again
Biological Nutrient

Sourced from agricultural waste

Developed and produced, then return to biological cycle to supply nutrients
Take from nature, return to nature
Our products achieve ecological circulation



Reduce microplastic residues for a better environment.

Tea Fiber Series Carbon Credit Value

How do bio-based products create carbon credits? Scientific calculations demonstrate the environmental benefits of tea fiber straws:

1

Baseline Emissions

1 ton of traditional PP straws emits about 3.5 t CO₂.

2

Tea Fiber Production

Tea plant growth absorbs -1.5 t CO₂; plus 1.3 t CO₂ from processing energy.

3

Net Benefit

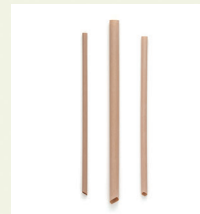
Each ton of tea fiber straws can avoid about 3.7 t CO₂ emissions, creating real carbon credit value.

Formula: Carbon Credit = Baseline Emissions – Bio-based Product Life Cycle Emissions

Raw Materials



Extrusion Grade		
Product	Properties	Application Reference
TS01	Biodegradable composite material, suitable for conventional extrusion molding equipment.	Straws, Cotton Swab Sticks
TS02	Biodegradable composite material, compatible with conventional extrusion molding processes.	Flexible Straws
TS03	Biodegradable composite material, suitable for conventional extrusion molding processes.	Straws, 3D Filament



Blown Film Grade		
Product	Properties	Application Reference
FB07	Biodegradable composite material suitable for blown-film extrusion and cast-film processing using conventional equipment. Suitable for food-contact applications.	shirt-style bags, shower caps, packaging film, food-storage bags
FB09	Biodegradable composite material suitable for blown-film extrusion and cast-film processing using conventional equipment.	shirt-style bags, packaging film
FB11	Biodegradable composite material suitable for blown-film extrusion and cast-film processing using conventional equipment. Suitable for food-contact applications.	T-shirt-style bags, packaging film, flat-bottom bags, food-storage bags
FB13	Biodegradable composite material suitable for blown-film extrusion and cast-film processing using conventional equipment.	shirt-style bags, packaging film



Injection Molding Grade

Product	Properties	Application Reference
DFST	Biodegradable composite material suitable for injection molding.	Dental floss pick, Toothbrush, Interdental brush
TKFS	Biodegradable composite material suitable for injection molding.	Cutlery, Comb, Hairpin
HC	Biodegradable composite material suitable for injection molding.	Cutlery, Comb, Hairpin, Cup
SH	Biodegradable composite material suitable for injection molding.	Shoe stretcher



Laminating Grade

Product	Properties	Application Reference
PFC	Biodegradable composite material suitable for extrusion coating.	Electronic product housings

Thermoforming Grade

Product	Properties	Application Reference
RHLB	Biodegradable composite material suitable for Leather processing and thermoforming.	Meal box, Blister pack.

Customer Applications

SOMA, Sen Kao Sha Coffee, Dreamers Coffee, Konedo Coffee, Preserve, EVA Air, China Airlines, China Airlines Catering, and other brands (including 300 mL straw-cup products and related items).





Processing & Storage Guidelines



Compatibility with Existing Equipment

- 100% compatible with conventional plastic-processing equipment.
 - No investment in new equipment is required.
 - No modifications to existing injection-molding or blown-film molds are required.
 - Standard purging procedures are sufficient when changing materials.
 - No unusual corrosion or wear of screws and molds is expected.
- 



Storage & Quality Control

- This material offers excellent biodegradability in soil at ambient temperatures. Follow the storage guidelines below to maintain the stated 24-month shelf life:
 - Moisture-proof sealing: Raw materials are packaged in high-barrier, moisture-resistant bags. If the contents are not used in full after opening, immediately reseal the bag using a heat sealer.
 - Temperature and humidity control: Store in a cool, dry warehouse. Keep unopened materials below 40°C and at a relative humidity below 60%.
 - Avoid sunlight: Protect the material from direct sunlight and UV exposure to prevent premature thermal degradation.
 - First-in, first-out (FIFO): Strictly follow FIFO inventory-management procedures to ensure that production materials remain in optimal condition.
- 

Designed to biodegrade completely in soil within 6 months, leaving no residual microplastics.

- 6 months: Complete natural biodegradation in soil at ambient temperatures.
- 100%: Biodegrades into water, carbon dioxide, and organic matter, contributing to the natural carbon cycle.
- 0%: Contains no added plasticizers or conventional petrochemical plastics and is not made from PLA.
- Zero Microplastics: Designed to leave no residual microplastics after complete biodegradation.

Degradation Test



Month 1



Month 2



Month 3



Month 4



Month 5



Month 6



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