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# COMPANY PROFILE



# **Ecosystem Services**

## **Mission Statement**

> NEW CREATING sincerely upholds the concepts of "Choose a matter", "Do a lifetime", "Benefit all "and establishes the idea that the development of green agriculture is the protection of ecology. It is a company that builds a complete, independent, and innovative ecological cycle system based on recyclability, traceability, and sustainability. With longterm research and development to replace chemical fertilizers with organic fertilizers, designing it into an easily quantifiable production model as well as vigorously promoting the cultivation model of efficient ecological cycle, comprehensive utilization of livestock and poultry manure combined with crop straw, customized biofungal formulation technology to carry out secondary pollution-free fermentation production, it has been recognized by the market as pure bio-organic fertilizer.

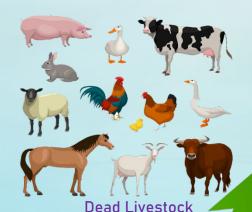
## **Mission Statement**

- NEW CREATING company's scientific and technological strengths: The ultimate one-stop pollution-free production system and customized lifelong service. Customers will benefit from NEW CREATING's sophisticated manufacturing capability and win the favor of domestic and foreign counterparts. The harmless treatment provided by NEW CREATING of bio-organic waste is the fastest treatment process in the world today. It can dispose some of the most troublesome animal and plant residues and manure in China, which are prone to putrefaction that cannot be treated easily by traditional composting methods within 24 hours. These residues include Livestock manure, waste from food or brewing factories, especially dead pigs, chickens, feathers, discarded fish, etc. Treated residues will turn into good-looking, fragrant fertilizers with high nutrient and low heavy metal contents. These fertilizers have high nutrient supply and adsorption capacity, capable of retaining soil water, improving soil, desert greening, chelating, and degrading heavy metal. Hence, the effects of these fertilizers used in the cultivation of crops and soil improvement are remarkable.
- The project has good economic and social benefits, combined with the cultivation, reasonable layout, source of waste reduction, resource regeneration to form a professional collection, harmless treatment, resource utilization, market-oriented sales, and agricultural cultivation cycle operation mechanism.
- > To ensure the never-ending cycle of China's green mountains and water, together with everlasting blessing, benefiting the country and its people.

#### CREATING ECOLOGICAL CYCLES WITH BIOLOGICAL RE-CULTIVATION

Independent research customization
Recipe process
Harmless
24 hours processing completed
The world's fastest,
Safe bio-fermentation technology

Agricultural Straw Wastes
Food Processing Wastes
Dead Livestock
Livestock waste



and poultry

Current Practice

Market Approach

Burial method

High temperature method

- The raw material crop straw accounts for 50%~75%
- > 50% of raw materials are diseased and dead poultry or livestock
- > 12-24 hours to produce high-quality bio-organic fertilizer
- Livestock and poultry waste does not fall to the ground, and the pollution source is disposed of nearby, without secondary pollution
- Establish a new industrial chain of a circular economy for agricultural and animal waste
- Safe and non-toxic organic food
- Accelerate the construction of beautiful countryside
- Safe organic green food on the family dining table

- Waste of resources, can not use a variety of crop straw
- Simplified technology causes serious secondary pollution
- The wide range of raw material transportation makes it easy for pathogens to spread and hide, and the recurrence of the epidemic will severely damage the production and living environment.
- If improper control flows into the market, food safety will be endangered drastically

## **Professional Team**



#### **Professional Team Department**

- Microbiological Analysis Cultivation
   Group (since 2002~)
- Mechanical Engineering R&D Group (since 2010~)
- 3. Mechatronics Design Group (since 2012~)
- 4. Testing and Maintenance Group (since 2012~)

## Company Core Technologies, Philosophy

# **Ecosystem** Services



Global Advanced Fast 24 hours Aerobic fermentation

**Independent research Biobacterium** 

Solving straw piles and burning

Diseased and dead animals and poultry, manure harmless treatment

**Customized production formulations** 

**Conscientious business No secondary pollution** 

365 days running production

Eco-friendly, non-toxic bio-organic fertilizer

**Create Ecology** 

# **Expanding** nationwide



microbial flora
Harmless.
Aerobic fermentation

#### Worldwide

- The richest organic crop material
- > The largest livestock

Green and organic to increase production and wealth

Soil permeability and water retention

Eliminate the use of pesticides

**Enhancement of root microbiota** 

Soil compaction and acidification improvement effect

Degradable chelated soil heavy metals

Decomposable soil plasticizer

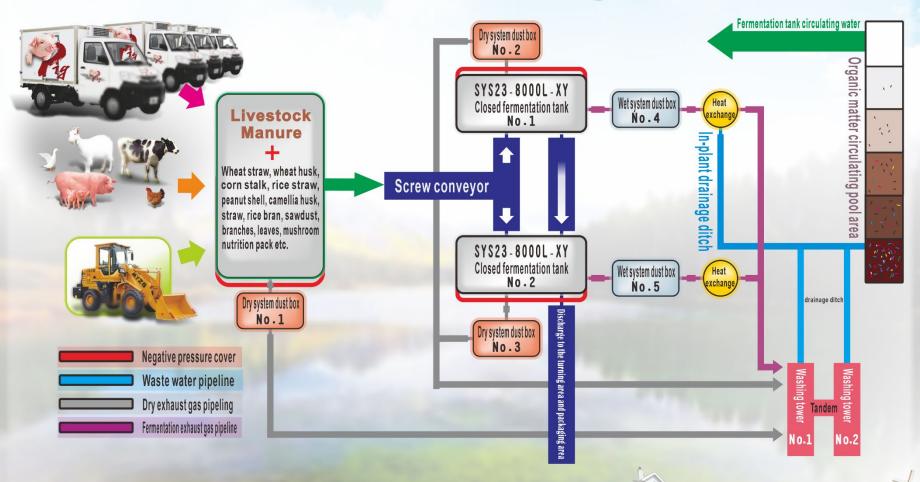
Safe organic green food on the family dining table

Large exporter of high-end organic food

The world's largest producer of pure organic fertilizer



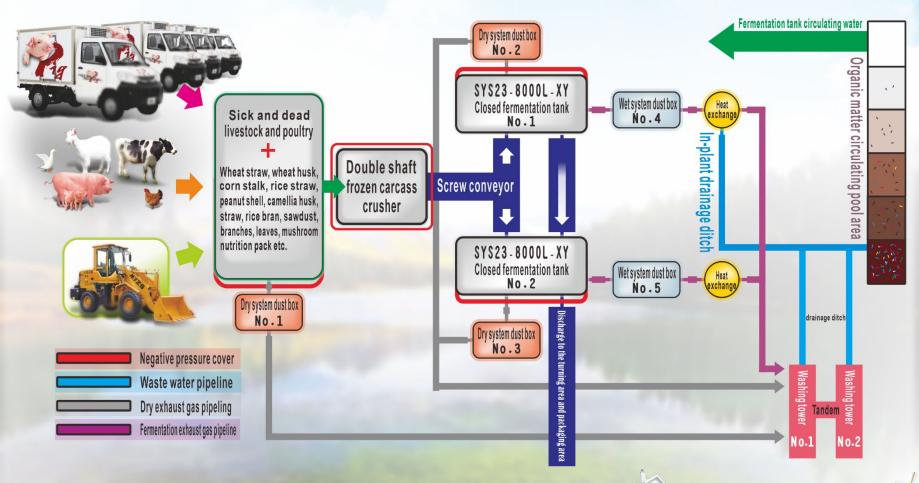
# Production flow chart of agricultural straw, livestock manure and bio-organic fertilizer



<sup>★</sup> Wet and dry dust , Sludge of organic matter recycling tank , and then put into the fermentation tank for organic material use



# Production flow chart of agricultural straw, sick and dead livestock and poultry and protein bio-organic fertilizer



★ Wet and dry dust , Sludge of organic matter recycling tank , and then put into the fermentation tank for organic material use

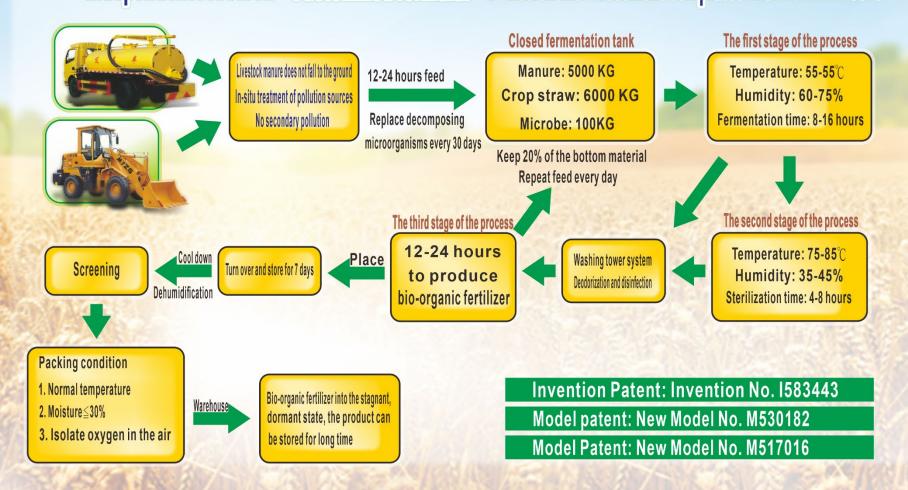
1. Daily treatment of sick and dead livestock and poultry 4 tons/tank/24 hrs, 2,728 tons/2tank/341 days 2. The daily use of agricultural straw powder is about 6 tons/tank/24 hrs, 4,092 tons/2tank/341 days

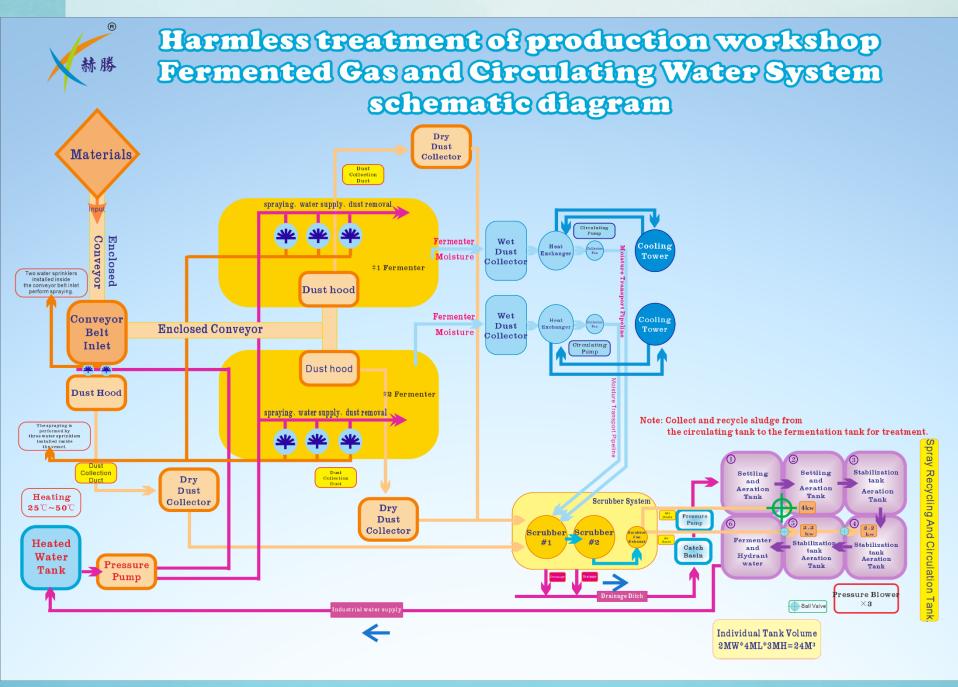
3. Produce protein organic fertilizer in 24 hours 5 tons/tank/24 hrs, 3,410 tons/2tank/341 days



# Production process of harmless organic fertilizer from agricultural straw and livestock manure

# Microbial aerobic fermentation Livestock manure does not fall to the ground Independent research Customized formular Pollution-free treatment completed within 12-24 hours





# Agricultural straw waste (auxiliary materials)

# Sick and dead livestock, manure waste

- > Wheat straw, wheat husk
- > Corn stalks
- > Rice straw
- Peanut husk
- Coarse bran, rice bran
- ➤ Wood chips
- > Tree branches, leaves
- Mushroom nutrition package

- Sick and dead pigs, chickens, ducks, cows, sheep...etc.
- Pig manure, chicken manure, duck manure, cow manure, sheep manure...etc.
- Wine lees, soybean meal, grape pomace...etc.
- Food processing plant sludge
- Sludge from industrial sewage plants (sludge organic fertilizer cannot be returned to the field, it can be used as vegetation after fermentation)

Municipal sewage plant sludge (fermented and returned to the field)

# Characteristics and types of microorganisms

There are 143 kinds of microorganisms with independent property rights, and the living environments are low temperature, medium temperature and high temperature. Non-pathogenic agricultural decomposing microorganisms are classified as follows:

- Cellulasses
- Hemicellulasses
- Pectinases
- B-glucanases
- Amly lases
- Lipases
- Proteases
- Phytases

# **Decomposition Enzyme of Harmless Organic Waste**

- SYS25-Slaughter enzyme (pig, chicken, duck, discarded fish...etc.)
- SYS27-Livestock excretion enzyme (pig manure, chicken manure, cow manure...etc.)
- > SYS31-food sludge enzyme
- > SYS33-Industrial sludge enzyme
- > SYS35-Living sludge enzyme

# Agricultural straw and animal manure 24-hour biological fermentation process Pure biological organic fertilizer

Characteristics of Hesheng's Bio-organic Fertilizer1

## Enzymes that can break down plasticizers in soil. The ubiquitous poison of the new century --- plasticizer

Phosphophthalic acid and phosphophthalic acid lipids are also known as [endocrine disruptors]. These substances enter the organism through air, water, soil, food, etc., and form pseudo-hormonal signals in the body, interfering with the normal secretion mechanism and causing endocrine disorders.

Plant irrigation and foliar fertilizer manufacturing method: 1 part of biological organic fertilizer 1: 10 times water (containing water, rice washing water, millet water), aerobic fermentation and stirring for 15 days

#### **Characteristics:**

- Organic matter content ≥ 60%, the most active material in the soil, is the basis of soil fertility, an important indicator of soil fertility.
- 2. The amount of organic matter in the soil is the key to the survival of beneficial soil microorganisms! Stable and long-lasting substances containing vital functions.
- 3. The product is 100% pure bio-organic fertilizer, with no root burn, and no rotten seedlings. The effect is mild and rapid. It is suitable for all kinds of organic fruit trees, organic rice, organic vegetables, organic tea, flowers...etc.
- 4. Improved soil, increased water retention, strong plants, rich green leaves, fresh and bright flowers, long flowering period, and not easy to fall off.
- 5. Pure organic process, environmental protection, non-toxic, no odor, can not be mixed with other agents, avoid direct sunlight, and sun, need to be stored in a dry place.
- 6. If white mycelium appears in this product, it is a special aerobic fermentation biological formulation, and it is a normal phenomenon without external additives. please use it with ease.

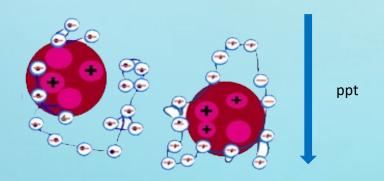
#### Characteristics of Hesheng's Bio-organic Fertilizer2

#### Enzymes that can alleviate the sequestration of heavy metals in the soil

- > γ-PGA is applied to increase the solubility of metal salts and effective phosphate in soil
- > γ-PGA can quickly chelate and flocculate toxic metal ions with high adsorption capacity

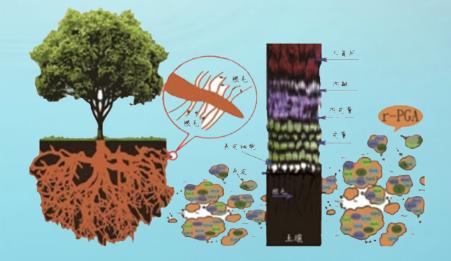
Y-PGA can quickly chelate and flocculate toxic metal ions with high adsorption capacity: lead, arsenic, cadmium, chromium, aluminum, copper, tc.

Flocculate toxic metals in soil and dissociate



#### $\gamma$ -PGA Chelate Enzyme

Bacillussubtilis TPX108
Bacillussubtilis TPX110
B. licheniformis MSc1



#### Characteristics of Hesheng's Bio-organic Fertilizer3









#### Soil improvement effect:

- hardening, acidification
- Degradation of nitrite
- Mitigation of chelated heavy metals

#### Soil permeability:

- Improves water retention
- Promotes metabolism
- More photosynthesis
- Increased soil temperature by 1-3 degrees

## Enhances rhizosphere microbes:

- Preserve soil fertility
- Replaces chemical fertilizers
- Prevent plant diseases
- Inhibit fungi and mycelium
- Eliminate the use of pesticides

## Green and organic sale of goods to increase

- increase production and wealth
- > Extend harvesting period
- Promotes crop growth
- Increases fruit sugar content
- Increase harvested weight by 20%~35%

### Composition list of chicken manure bio-organic fertilizer

Test value	≤ 17	Dark Brown Powder	++	billion/g. The number of strains		
Test Item	moisture	color	odor	The Bacillus subtilis flora contains 0.3-0.7		
Test value	2	< 0.2	3	< 1	< 10	
Test Item	As	Hg	Pb	Cd	Cr	
Test value	6. 6	≥ 65	2.33	2. 08	2.09	
Test Item	PH 1:1	Organic Matter %	N %	Р %	К %	

#### Remark:

- 1. The above data will vary due to different main raw materials and crop straw.
- 2. The number of Bacillus subtilis flora is the microbial formula of the fermentation process, not an external additive.

# The Water retention rate of 6.07 mu and 2.54 cm thick soil area

water storage table of organic matter soil

Organic Matter Improves the Effective Utilization Rate of Chemical Fertilizers

moisture content	Water retention			Water storage/ton	soil type	Fertilizer Utilization Efficiency
2%				121		30%-45%
5%	15%		20.0%	303	general soil	3070 4070
8%		60%	300%	485	organic matter soil	85% above

- ➤ Relevant data confirmed that the utilization rate of chemical fertilizers applied to soil is only 30%-45%, chemical fertilizers that cannot be directly absorbed by plants are prone to soil salinization and compaction.
- > The soil containing organic matter can increase the effectiveness of the utilization rate of chemical fertilizers to more than 85% due to the functions of decomposing phosphorus and potassium by beneficial microorganisms.

# Difference table between Hesheng pure organic fertilizer and farm manure and chemical fertilizer

Working conditions		Hesheng Pure Organic Fertilizer	Farmyard manure (retting)	Chemical fertilizers
Fermentation type		Aerobic fermentation. 24 hours	Anaerobic fermentation. More than 60 days	Chemical manufacturing
Decomposed Fertilizer odor		Mellow flavor. Without burning of root or rotten seedlings	Stinky. Incompletely decomposed	Chemical manufacturing. Stable
	armful substances mful bacteria, insect eggs)	None (deodorization. Sterilization. No secondary pollution)	There is a certain amount of harmful bacteria and insect eggs	None
	Nutrient content	More comprehensive. Rich in various trace elements. Contains diverse agricultural microbiota	Trace elements are scarce. Need to add agricultural microbiota	Single nutrient (1 or several). Need to add agricultural microbiota
Q	uality of Fertilizer	Slow release. Long-lasting. Long- term storage	Slow release. Long-lasting. Not easy to store	Fast fertilizer effect, short validity period, easy storage
	Effects on Soil Microorganisms	Provide a wide range of microorganisms to the plant root system to improve crop resistance to pests and diseases. Eliminate the use of pesticides	Simple process method causes severe secondary pollution (such as water pollution. Air pollution)	The microorganisms in the rhizosphere of crops are single, and fungi and mycelia are prone to damage
Effe	cts on Soil Structure	Improve organic matter content, soil permeability, water and fertilizer retention, more vigorous photosynthesis, combined soil heavy metals, degrade nitrite, and promote metabolism	Wide range of sources. miscellaneous ingredients, heavy metals exceed the standard	Organic ions in chemical fertilizers can easily cause microbial death, resulting in soil compaction, acidification, and high levels of heavy metals
	Applicability	Fertilizer tillage in the form of ring or furrow as a base fertilizer, liquid fertilizer, and top dressing usage to promote crop fertility, increase harvest, environmental protection, non-toxic, and complete hygiene	Use as base fertilizer	It is used for crop fertilization and topdressing, with fast effect

# NEW CREATING FACTOR

#### Production area



Automatic dosing and deodorization scrubber



Production area



New creating microbial expansion laboratory







## HEILONGJIANG HESHENG FACTOR



Dual Shaft Fermentation
System

Deodorization scrubber and cooling water tower system

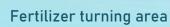




Dry Dust Collection System



Dual Shaft Fermentatior
System





Fertilizer storage area



The production of bio-organic fertilizer (chicken manure + cow manure + corn grain + plant ash from the power plant). The storage area is covered with snow and is freezing below -20°, but there is still heat generated. This can only be achieved if the fertilizer contains microorganisms. Above is an example of our exclusive technology for your reference

Hesheng microbial expansion laboratory

## **Guangxi Wuming Customer Factory Photos**

Sick and dead pigs, customs frozen smuggled meat, market confiscation of smuggled meat and crop straw production line

#### Frozen carcass twin shaft shredder system

Put the frozen sick and dead pigs or livestock and poultry meat into the double shaft frozen carcass crusher, crushed by high-speed hammer blade, then fed into the feed port by screw conveyor, the whole process of negative pressure without external leakage, no secondary public hazards







Single shaft fermenter system and screw feeding system

## Single shaft fermentation tank discharge and conveying system





Deodorization
dosing scrubber
system

