

Natural Value Cherishing Rarity

Lanjing Natural Multi-Mineral Fertilizer Manual



Over 60 types of natural mineral nutrients continuously replenish essential trace elements in the soil



The raw ore species have been uniquely identified through a century of domestic and international research Making it a one-of-a-kind new mineral species



01

Lanjing ecological growth process



Inner Mongolia Lanjing Ecological Technology Co., Ltd., a subsidiary of Inner Mongolia Huachen Renewable Resources Technology Co., Ltd., is an innovative company committed to green technology and the sustainable future. The company specializes in the development of inorganic non-metallic materials and has spent a decade deeply researching the broad applications of wulan crystal. It is a technology-oriented company that actively explores the effects of mineral fertilizers in agriculture, grassland restoration, and soil ecological recovery. The group company's experience is as follows.

2014

The parent company, Inner Mongolia Huachen Renewable Resources Technology Co., Ltd., has initiated the integration and acquisition of mining operations and completed the preliminary work of topsoil stripping and factory infrastructure construction.

2015

Equipment has been purchased and commissioned, and the product has been named as Wulan Brown by the national industry association, entering the processing and sales phase. Concurrently, research and development on the recycling and utilization of wulan crystal is underway.

2016

The company constructed a comprehensive staff dormitory building and signed cooperation agreements with the Hebei Shahe Research Institute of Glass Technology and Wuhan University of Technology to conduct research and development on the recycling and utilization of wulan crystal.

2017

The company introduced urban reclaimed water to the factory and mining areas for production use, while also discovering that the ore body can serve as a high-quality composite material.

2018

Recognized as a regional-level green mine, the mining area has seen the construction of standardized staff dormitories, upgrades and renovations to mining roads, and the implementation of greening initiatives. Additionally, a corporate research and development center has been established.

2019

The mineral was found to be rich in over 60 elements and is an inorganic non-metallic material with properties such as antimicrobial, easy to clean, selenium-rich, capable of releasing far-infrared negative oxygen ions, and possessing high impact resistance. Five invention patents and five utility model patents have been applied for. The company has constructed two production lines for wulan crystal functional materials with an annual output of 350,000 tons, and one production line for artificial stone, lanquer series of colored sand with an annual output of 150,000 tons. Certifications for quality, occupational health and safety, energy, and environmental management systems have been obtained.

2020

The company obtained a Scientific and Technological Achievement Registration Certificate, and the product has been appraised to reach an internationally leading level in both process technology and product application. It established production lines for wulan crystal B and C materials, applied for five invention patents, and has been recognized as a high-tech enterprise.

2021

Awarded the title of National Green Factory Enterprise, the company has established an Enterprise Innovation Center and a ceramic pilot production line. It has reached cooperative agreements with Shaanxi University of Science and Technology, Inner Mongolia University of Science and Technology, and Muland Agricultural Technology (Inner Mongolia) Co., Ltd. The company has completed the national industry group standard for "wulan crystal powder" and established the joint venture, Inner Mongolia Lanjing Ecological Technology Co., Ltd.

2022

Recognized as a regional-level green supply chain enterprise, the company has obtained the CMA certification for inspection and testing institutions. It has completed the construction of a production line with an annual capacity of 3,000 tons for frit, achieving mass production of sanitary porcelain frit, lead-free antibacterial frit, and ceramic dry granules. A cooperative agreement has been reached with the Ulanqab City Agricultural and Forestry Research Institute. The company has applied for seven utility model patents and has obtained certification for intellectual property management systems.

2023

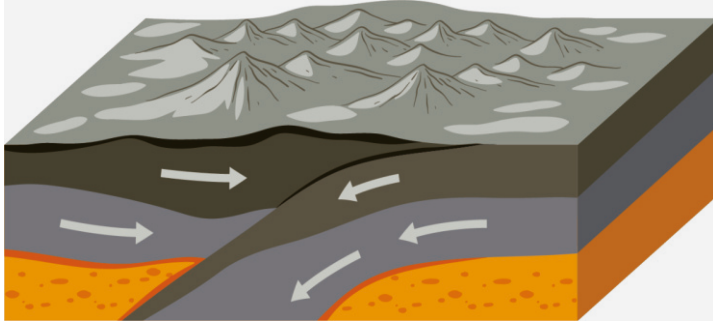
Completed the construction of an annual 350,000-ton multi-micro mineral fertilizer production project, marking the transition to the processing and sales phase. The company has been granted the status of a regional-level research and development center, honored with the title of Innovative Enterprise, and awarded the regional Labor Day Certificate.

2024

Awarded the "Specialized, High-end and Innovation-driven SME" certificate, the company has a sales network that spans across the nation and is actively expanding into international markets. The main business scope includes the supply of standardized mineral raw materials, OEM production, and sales of mineral fertilizers.

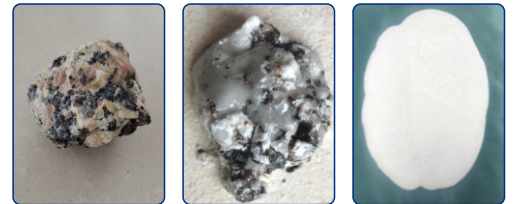
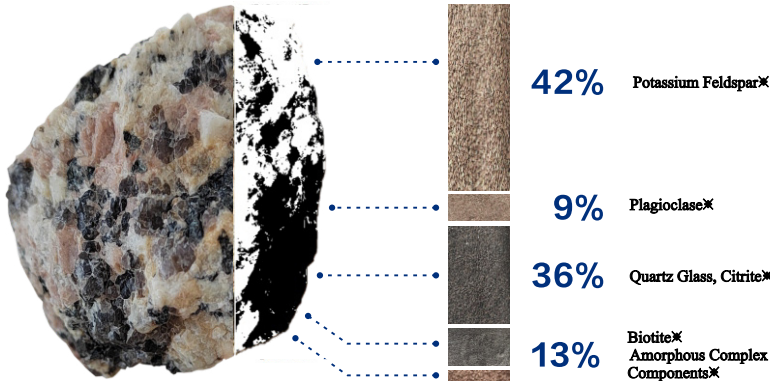
02 | Natural ecological mineral fertilizer development process

1 | Metallogenic condition



During the Permian Period of the Paleozoic Era, approximately 290 million years ago, the Indo-China movement was highly active, marking a significant geological period in China's geological history. During this time, three-quarters of China's current landmass completed its assembly and unification. In the region now known as Huade County, Ulanqab, Inner Mongolia Plateau (with coordinates ranging from East Longitude: 113°56'45" to 113°57'23" and North Latitude: 41°52'36" to 41°52'56"), extensive geological changes occurred. The original coarse-grained pegmatite structure, primarily composed of pegmatite silicate, was significantly affected by the Late Triassic Yanshan tectonic period (about 250 million years ago), leading to the formation of three distinct translational fault zones. The mineral bodies and magma erupted along these fault zones, and a complex and unique rock foundation gradually formed, covering an overall area of 16.8 square kilometers. The three translational fault structures in different directions created a core enrichment area, infusing various trace elements, including rare earth elements, into the mineralized coarse-grained pegmatitic rocks and magma. This process led to the formation of large phenocrystalline feldspar, tea-colored quartz, and biotite, among other minerals. Under the influence of strong internal stress and geological structural conditions, a secondary mineralization occurred as a result of the subsequent magma intrusion. These transitional intermediate products, enriched with rare earth elements and light metal oxides, underwent further fusion and interaction with the magma, causing the mineral components to fractionate again. During the alternating crystallization of minerals, elements such as the lanthanide series, light metals, selenium, and nutrients required by plants were melted or crystallized into different material forms of the ore body, resulting in the formation of a unique new mineral species known as "wulan crystal".

孔深 (m)	采取率 (%)	地质描述	岩矿体标本
8.5	93.65	风化黑云母钾长石花岗岩; 岩石破碎, 呈杂乱块状粉红色, 矿物成分主要由石英、钾长石、斜长石、黑云母及少量副矿物组成, 矿物含量肉眼可识别, 岩石粒径在0.5-2.0cm之间, 个别可达5cm.	
14.10	98.93	裂隙发育黑云母钾长石花岗岩; 岩石呈肉红色, 粗粒花岗岩结构, 块状构造, 主要矿物成分由黑云母、钾长石、斜长石、石英等组成, 黑云母呈鳞片状, 含量约5%; 钾长石、肉红色, 板状或粒状, 含量约40%; 斜长石呈灰白色板状, 含量约25%; 石英呈不规则粒状分布于钾长石之间, 含量约20%; 8.8m处, 见节理裂隙, 轴夹角50°-20.5m处, 见节理裂隙, 轴夹角30°-10.6m处, 见节理裂隙, 轴夹角60°-13.7m处, 见节理裂隙, 轴夹角70°; 该层为节理裂隙发育区.	
20.20	98.36	黑云母钾长石花岗岩; 岩石呈肉红色, 粗粒花岗岩结构, 块状构造, 主要矿物成分由石英、钾长石、斜长石、石英等组成, 黑云母呈鳞片状, 片径0.3cm左右, 含量约5%; 钾长石、肉红色, 板状或粒状, 粒径1-3cm, 含量约40%; 斜长石呈灰白色板状, 直径0.5-1.5cm, 含量约20%; 石英呈不规则粒状分布于钾长石之间, 含量约20%. 该层在17.2处, 见有长0.5m的中细粒黑云母花岗岩, 中细粒花岗岩结构, 块状构造, 岩石呈灰白色, 较为完整.	
23.80	100		
39.10	96.67	中细粒黑云母花岗岩; 岩石呈肉红色, 中细粒花岗岩结构, 块状构造, 岩石成分主要矿物由长石、石英、黑云母等组成, 石英、烟灰色, 透明状, 大小在0.2-2.0mm之间, 含量约30%; 长石以浅肉红色为主, 部分浅灰白色, 板状或板状, 大小在0.5-2.0mm之间, 含量约30%; 黑云母, 为黑色鳞片状, 大小在1-2mm之间, 含量约10%. 该层岩体较为完整, 未见明显的矿化蚀变现象.	
45.10	100		
89.62	100	黑云母钾长石花岗岩; 岩石呈肉红色, 粗粒花岗岩结构, 块状构造, 主要矿物成分由石英、钾长石、斜长石、黑云母等组成, 黑云母呈鳞片状, 片径0.3cm左右, 含量约5%; 钾长石、肉红色, 板状或粒状, 粒径1-3cm, 含量约40%; 斜长石呈灰白色板状, 直径0.5-1.5cm, 含量约20%; 石英, 半透明, 呈不规则粒状分布于钾长石之间, 含量约20%. 该层在31.8m处, 见有长0.4m的中细粒黑云母花岗岩, 中细粒花岗岩结构, 块状构造, 岩石呈肉红色, 较为完整.	
104.44	98.75	30.4m处, 见节理裂隙, 轴夹角25°-44.3m处, 见节理裂隙, 轴夹角60°-88.2m处, 见节理裂隙, 轴夹角70°.	
106.24	98.33	中细粒黑云母花岗岩; 岩石呈灰红色, 中细粒花岗岩结构, 块状构造, 岩石成分主要矿物由长石、石英、黑云母等组成, 石英、烟灰色, 透明状, 大小在0.2-2.0mm之间, 含量约30%; 长石以浅肉红色为主, 部分浅灰白色, 板状或板状, 大小在0.5-2.0mm之间, 含量约30%; 黑云母, 为黑色鳞片状, 大小在1-2mm之间, 含量约10%. 该层岩体较为完整, 未见明显的矿化蚀变现象.	
122.84	98.49	黑云母钾长石花岗岩; 岩石呈肉红色, 粗粒花岗岩结构, 块状构造, 主要矿物成分由石英、钾长石、斜长石、黑云母等组成, 黑云母呈鳞片状, 片径0.3cm左右, 含量约5%; 钾长石、肉红色, 板状或粒状, 粒径1-3cm, 含量约40%; 斜长石呈灰白色板状, 直径0.5-1.5cm, 含量约20%; 石英, 半透明, 呈不规则粒状分布于钾长石之间, 含量约20%. 124.64m处, 见节理裂隙, 轴夹角50°-125.14m处, 见节理裂隙, 轴夹角70°-125.74m处, 见节理裂隙, 轴夹角60°-126.14m处, 见节理裂隙, 轴夹角60°; 该层为节理裂隙发育区.	
126.24	98.53		
150.4	98.10	黑云母钾长石花岗岩; 岩石呈肉红色, 粗粒花岗岩结构, 块状构造, 主要矿物成分由石英、钾长石、斜长石、黑云母等组成, 黑云母呈鳞片状, 片径0.3cm左右, 含量约5%; 钾长石、肉红色, 板状或粒状, 粒径1-3cm, 含量约40%; 斜长石呈灰白色板状, 直径0.5-1.5cm, 含量约20%; 石英, 半透明, 呈不规则粒状分布于钾长石之间, 含量约20%. 136.14m处, 见节理裂隙, 轴夹角50°-146.96m处, 见节理裂隙, 轴夹角50°.	

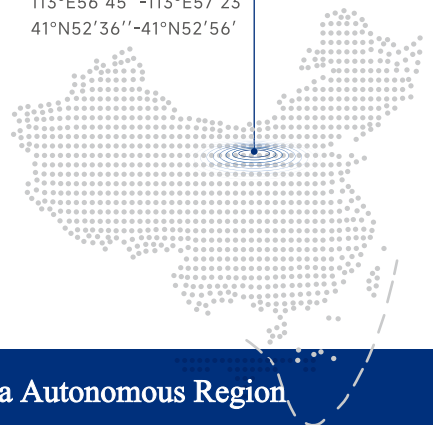


The complex mineral composition endows the product with new functions

Over 60 kinds of mineral elements, providing balanced nutrition



Geographic Coordinate:
113°E56'45"-113°E57'23"
41°N52'36"-41°N52'56'

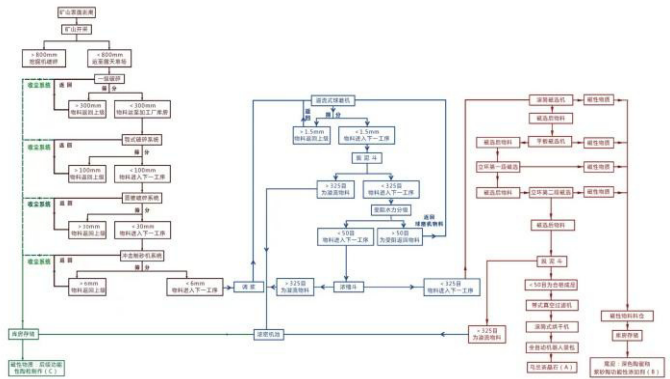


Mine Location: Huade County, Ulanqab, Inner Mongolia Autonomous Region

2 Raw ore separation process

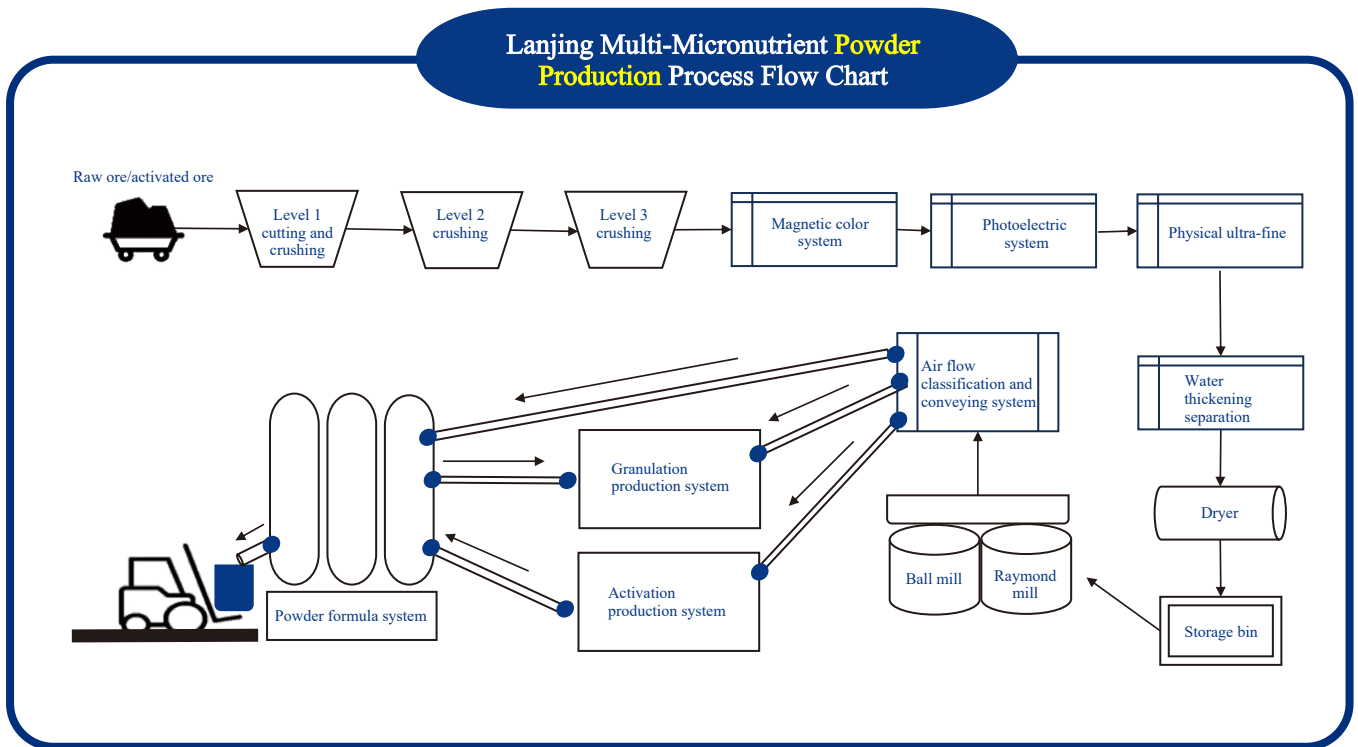


Process Flow Diagram



Utilizing our independently developed pure physical process technology, beneficial components are enriched, making it a functional new type of fertilizer raw material. The mining process combines dry and wet methods, where the ore is first roughly, medium, and finely crushed, along with wall-breaking and shadow separation. It then undergoes multiple cycles of primary and overflow circulation processes for secondary separation. Different magnetic materials are subjected to two stages of weak and one stage of strong gradient magnetic separation, ultimately leading to vacuum dehydration. The production and processing technology mainly relies on common process equipment for crushing, using coarse and fine crushing equipment, and our self-developed vertical sand-making machines for further fine crushing. High-silica aluminum grinding machines further reduce the particle size to a minimum crystal grain of the original mineral to 60 mesh for conventional permanent magnetic rough selection separation. Strongly magnetic materials are separated, and then refined through vertical high-gradient electromagnetic ore dressing to achieve high-quality and eco-functional raw materials. This technology effectively ensures that the nutrient elements enriched in the crystalline mica and amorphous substances are not lost, meeting the production requirements for products with different functional needs.

Lanjing Multi-Micronutrient Powder Production Process Flow Chart



3 Secondary activation process



The company employs the hydrothermal cultivation technology from the Chinese Academy of Agricultural Sciences, which involves processing the parent rock ore of wulan crystal by crushing and grinding it, then adding alkaline soil activators and catalysts. After mixing with water and pouring into molds, the material undergoes a hydrothermal reaction in an autoclave at high temperatures and under saturated steam pressure. The final product, after drying and milling, is ready for market. The wulan crystal raw material, treated with the high-temperature steaming and activation process, has all its mineral elements transformed into a form that can be effectively absorbed and utilized by plants as nutrients. The newly formed mineral particles are refined into nano-scale particles, and the original ore is expanded into a porous, loose structure similar to soil aggregates. The bulk density of the material is reduced, dropping from 0.9-1.0kg per square meter to 0.6-0.7kg per square meter. With a pH of around 11.5, it is a natural mineral material for acid adjustment and nutrient supplementation.

Rich in elements/over 60 kinds of elements

Authenticated by authoritative institutions
the raw ore contains over 60 kinds of rich mineral elements
Passing heavy metal safety tests
Safe and non-radioactive

Standardization and stability

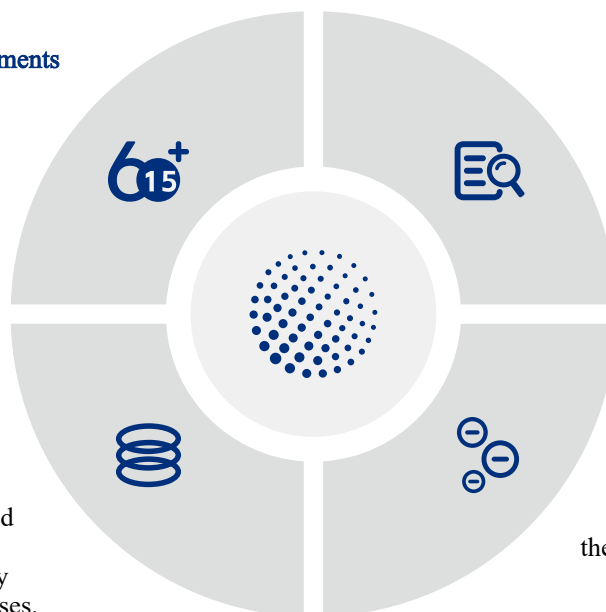
Huge ore resources
Standardized production process
Authoritative testing laboratory

Possessing far-infrared functionality

Possessing relatively stable far-infrared wavelength bands
with the far-infrared emission intensity increasing as the amount added increases.

Negative oxygen ion functionality

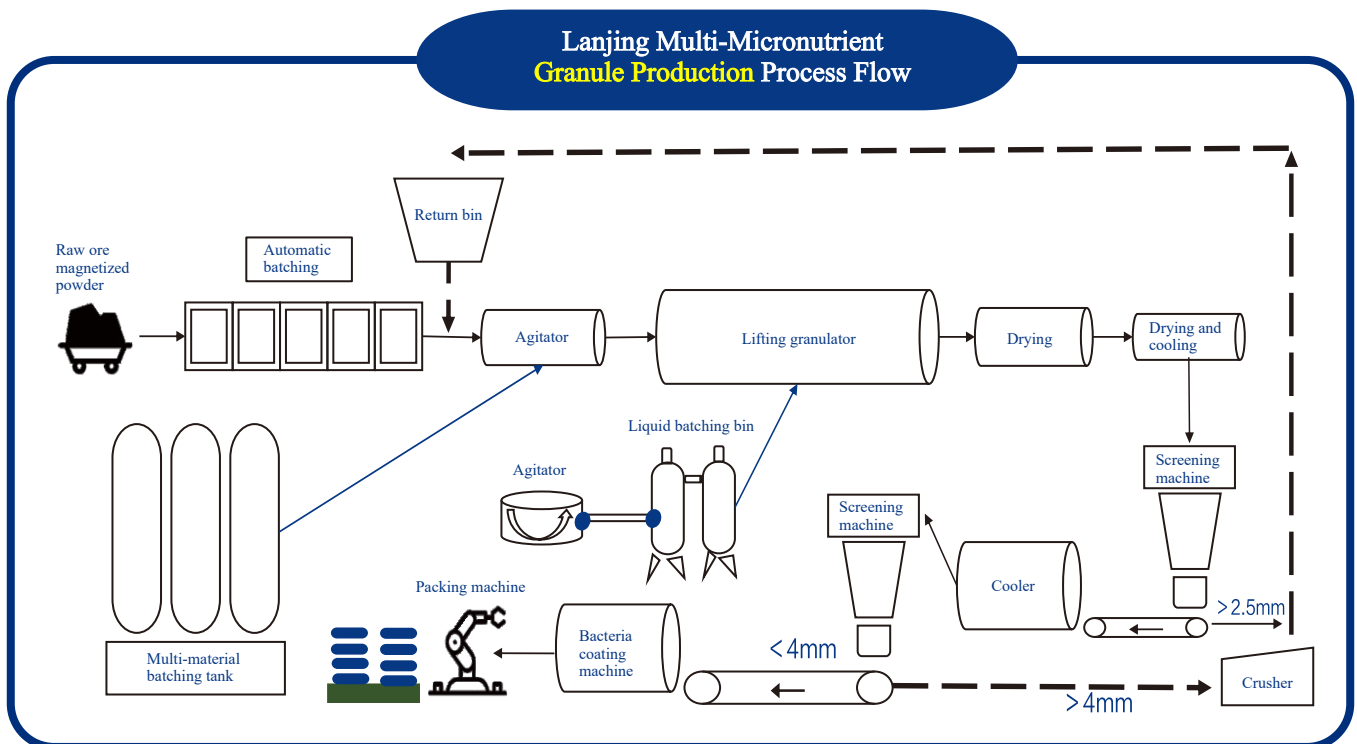
Electron release then captured by surface oxygen molecules to form negative oxygen ions



4 Mineral fertilizer manufacturing process

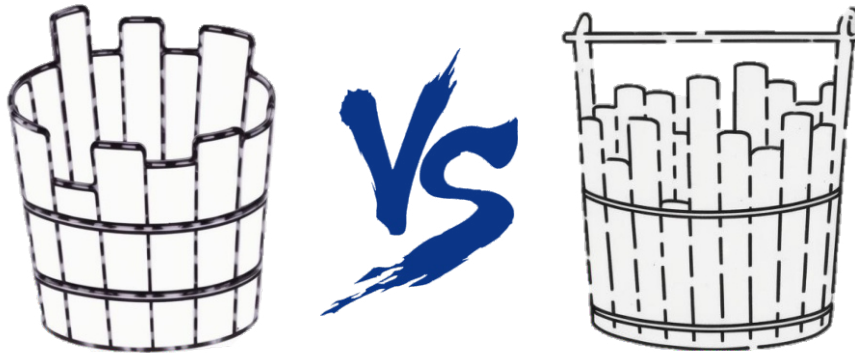
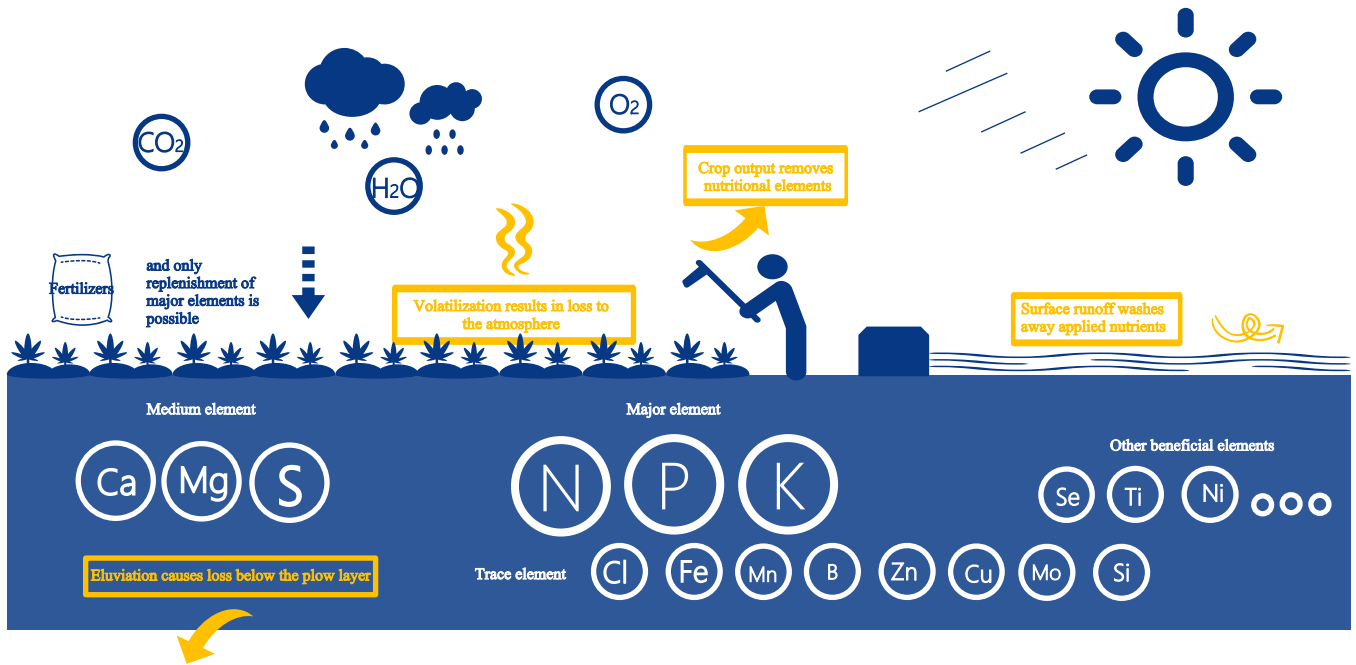


Soil is a complex mixture composed of a variety of different chemical elements, and it is generally believed that there are more than 80 types of elements in the soil. Lanjing Ecological Technology Co., Ltd. primarily uses natural minerals as raw materials, conducts in-depth research on fertilizer formulations, and emulates the nutritional composition of soil with the concept of "from nature, back to nature". By utilizing mineral elements that are already in a stable natural state, it balances and replenishes the gradually depleted elements in the soil. Currently, the annual production capacity of the mineral fertilizer production line has reached 350,000 tons.





Without proper rest, the medium and trace elements would lack replenishment







Break away from traditional nutritional theories and adopt the "multi-source and multi-element" concept

Over 60 types of mineral elements + essential elements + microorganisms + active organic matter + metabolites + imported mineralized enzymes

“ The main application directions are the supply of natural multi-micro mineral raw materials and OEM customization services. ”

The following types of products can all be added.

			
Agricultural microbial inoculants	Soil amendment	Manure	Complex fertilizer
<ul style="list-style-type: none"> Microbial inoculant carriers Compound microbial fertilizer carriers Medicament-fertilizer carriers 	<ul style="list-style-type: none"> Non-water-soluble medium elements Soil conditioner 	<ul style="list-style-type: none"> Organic mineral supplement Bio-organic fertilizers Seedling substrate addition 	<ul style="list-style-type: none"> Complex fertilizer efficacy enhancers Bulk blend fertilizer addition Organic-inorganic mixed fertilizers Controlled-release fertilizer efficacy enhancement

Innovate with Vision, Achieve with Excellence, Choose Lanjing

“ Recommendations for Adding Lanjing Natural Multi-Mineral Fertilizer Raw Materials ”

	No.	Product type	Applied material	Addition amount
Carrier type	1	Microbial inoculants	Raw ore powder	30-85%
	2	Compound microbial fertilizers	Raw ore powder	30-60%
	3	Soil remediation inoculants	Raw ore powder	30-80%
Efficacy enhancement addition type	4	Non-water-soluble medium elements	Activated ore powder	50-85%
	5	Soil conditioner	Activated ore powder	50-85%
	6	Organic fertilizers	Raw ore powder/ activated ore powder	20-50%
	7	Bio-organic fertilizers	Raw ore powder/ activated ore powder	20-50%
	8	Complex fertilizer	Activated ore powder	4-12%
	9	Mixed fertilizers	Raw ore powder/ activated ore powder	5-10%
	10	Organic-inorganic mixed fertilizers	Activated ore powder	20-50%
	11	Feed	Raw ore powder	0.5-1%
	12	Other synergist	Activated ore powder	5-20%



Low-cost supplement of missing medium and trace elements in soil



Enhance yield and improve crop quality while planting



Improve soil acidification and salinization issues



Address yellowing and reduction in output caused by long-term crop cultivation



Mineral microbial inoculants

- Natural multi-mineral source carrier
- Special strains
- Microbial metabolites



Soil deacidification salt Renovate double mineral source

- Strong acid adjustment locking salt content rapidly
- Significant rooting, nutrition complete vigorous growth
- Increase weight and fragrance, increase quality for excellent taste



Dosage form: Powder

Packaging specification: 1,000kg/bag, 750kg/bag, 25kg/bag, 20kg/bag bulk

Raw ore powder technical indicators

Product execution standard: Q/150922NLJ-001 for production enterprise processing and use only

No.	Parameter	Result	Applicable standard
1	SiO ₂	70.60%	GB/T4734-2022
2	SiO ₂	8315.5 mg/kg	NY/T2272-2012
3	CaO	1.30%	GB/T4734-2022
4	CaO	6251.6 mg/kg	NY/T2272-2012
5	MgO	0.50%	GB/T4734-2022
6	MgO	523 mg/kg	NY/T2272-2012
7	K ₂ O	5.50%	GB/T4734-2022
8	K ₂ O	7502.3 mg/kg	NY/T2540-2014
9	N	282 mg/kg	NY/T525-2021
10	P	111.3 mg/kg	NY/T2541-2014
11	Fe	1.40%	GB/T30902-2014
12	S	213.975 mg/kg	GB/T30902-2014
13	H ₂ O	dry: 3%, wet: 23%	NY/T798-2004
14	PH	6.0-8.0	GB/T9724-2007

Activated ore powder technical indicators

Product execution standard: Q/150922NLJ-001 for production enterprise processing and use only

No.	Parameter	Result	Applicable standard
1	SiO ₂	49.10%	GB/T4734-2022
2	SiO ₂	15.20%	NY/T2272-2012
3	CaO	27.60%	GB/T4734-2022
4	CaO	22.10%	NY/T2272-2012
5	MgO	5.40%	GB/T4734-2022
6	MgO	6.02%	NY/T2272-2012
7	K ₂ O	3.80%	GB/T4734-2022
8	K ₂ O	5253.6mg/kg	NY/T2540-2014
9	N	258.2mg/kg	NY/T525-2021
10	P	176.88mg/kg	NY/T2541-2014
11	Fe	1.12%	GB/T30902-2014
12	S	715.2 mg/kg	GB/T30902-2014
13	Ti	1034 mg/kg	GB/T30902-2014
14	Se	1.02 mg/kg	GB/T30902-2014
15	Water content	≤15%	NY/T798-2004
16	PH(1:250)	9.5-11.5	GB/T9724-2007

Main Element	Primary Role in Plants
Si	Enhances photosynthesis efficiency, strengthens root activity, improves resistance to lodging, disease, and pests, increases yield and quality
Ca	Promotes cell wall development, improves disease resistance, regulates metabolic processes, enhances fruit quality
Mg	Promotes photosynthesis, stimulates metabolism, improves disease resistance, aids in vitamin synthesis
N	Promotes growth, enhances photosynthesis, encourages flower bud differentiation
P	Stimulates root growth, encourages flower bud differentiation, promotes fruit ripening, enhances stress resistance
K	Promotes vertical growth, improves stress resistance, aids in fruit development, regulates ion balance
Fe	Involved in chlorophyll synthesis, affects photosynthesis, participates in respiration
S	Promotes protein synthesis, involved in photosynthesis, improves stress resistance

06

Lanjing Natural Multi-Mineral Fertilizer Efficacy Display

Corn effect

“

📍 Location: Dezhou, Shandong Province

- Aerial roots stout, more secondary roots
- Dense kernels, no protruding tips, full grains

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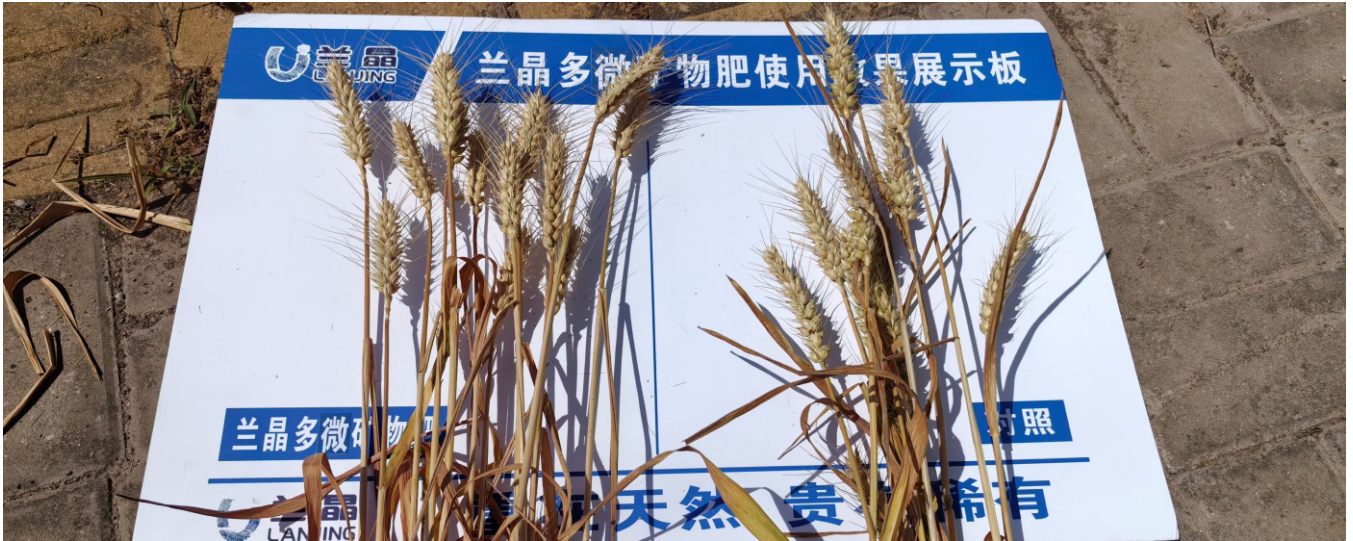


Wheat effect

“

Location: Wheat producing areas of Shandong and Henan
·Large wheat heads, plump grains, and well-developed root systems

”



Potato effect

“

📍 Location: Bashang area, Inner Mongolia

·Promotes wound healing, prevents exogenous bacteria invasion, assists tuber drying, locks surface moisture, stimulates seed germination ability after sowing, root and sprout coexistence, no side effects. As a base fertilizer, it can effectively promote root growth, increase the number of potatoes formed, and improve overall growth.

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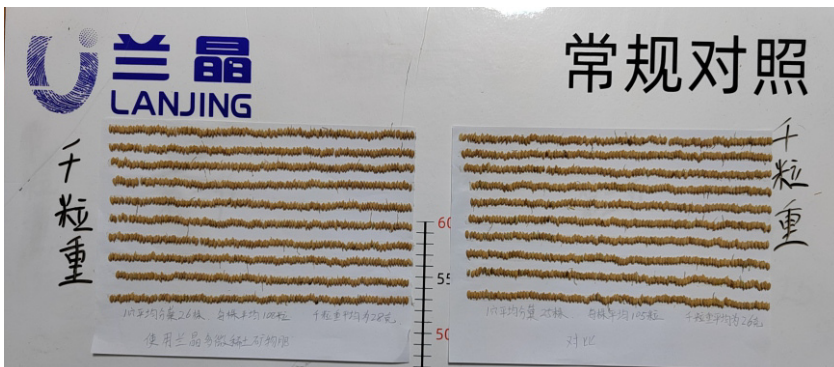
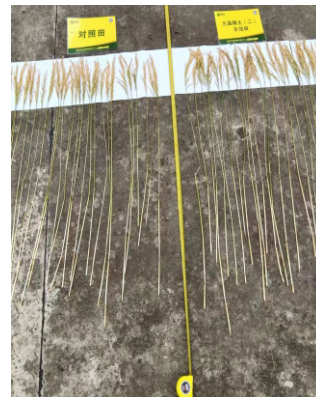
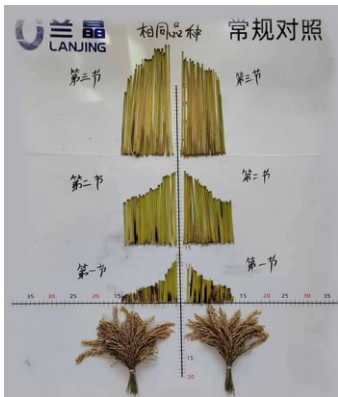
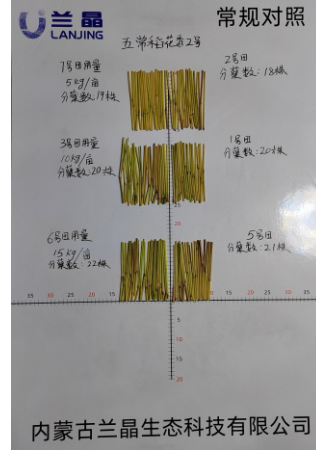
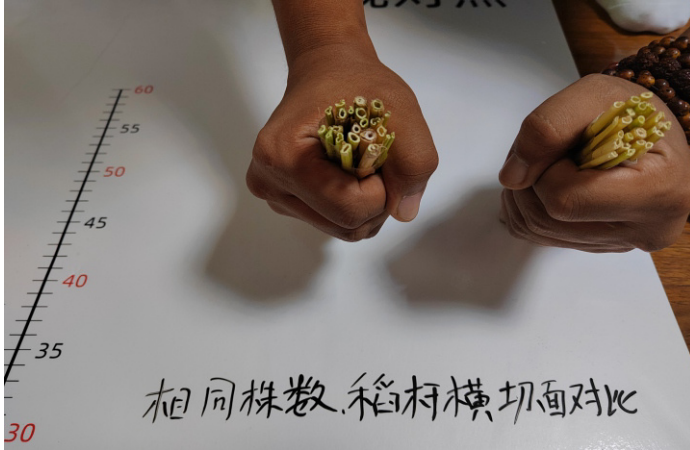
Rice effect

“

Location: Wuchang, Heilongjiang Province

·Increasing TGW, reducing moisture content, and boosting yields by 15.2% enhances the rice's ability to resist lodging.

”



Effect of selenium-enriched rice on cadmium reduction



Location: Shizhou Town, Guiping City, Guangxi



检验检测报告 INSPECTION AND TEST REPORT	
报告编号 (No.):	SJ3002000121001
客户名称 (Client):	广西桂平市农业科学研究所
委托单位/检测依据 (Client/Reference):	北京市农业区划研究所中试4号远洋蔬菜405
样品名称 (Sample Name):	石斑鱼 水11村大果 (处理1)
样品编号 (Sample No.):	SJ3002000121001A
包装情况 (Packaging Condition):	袋装-包装完好
检测日期 (Report Date):	2020年12月16日
检测日期 (Test Date):	2020年12月11日至2020年12月17日
检测项目 (Test Item):	硒含量
检测方法 (Method):	GB 5009.15-2014
单位 (Unit):	mg/kg
检测结果 (Result):	0.058
检测限 (LOD):	0.003
检测精度 (Precision):	0.003
检测标准 (Standard):	GB 5009.15-2014
检测结论 (Conclusion):	符合国家标准
审核人 (Assessor):	于静
授权人 (Authority):	李洪明

Blank Group

Selenium 0.058
Cadmium 0.40

检验检测报告 INSPECTION AND TEST REPORT	
报告编号 (No.):	SJ3002000121002
客户名称 (Client):	广西桂平市农业科学研究所
委托单位/检测依据 (Client/Reference):	北京市农业区划研究所中试4号远洋蔬菜405
样品名称 (Sample Name):	石斑鱼 水11村大果 (处理2)
样品编号 (Sample No.):	SJ3002000121002
包装情况 (Packaging Condition):	袋装-包装完好
检测日期 (Report Date):	2020年12月16日
检测日期 (Test Date):	2020年12月11日至2020年12月17日
检测项目 (Test Item):	硒含量
检测方法 (Method):	GB 5009.15-2014
单位 (Unit):	mg/kg
检测结果 (Result):	0.55
检测限 (LOD):	0.003
检测精度 (Precision):	0.003
检测标准 (Standard):	GB 5009.15-2014
检测结论 (Conclusion):	符合国家标准
审核人 (Assessor):	于静
授权人 (Authority):	李洪明

Applied 5kg/mu

Selenium 0.55
Cadmium 0.16

检验检测报告 INSPECTION AND TEST REPORT	
报告编号 (No.):	SJ3002000121003
客户名称 (Client):	广西桂平市农业科学研究所
委托单位/检测依据 (Client/Reference):	北京市农业区划研究所中试4号远洋蔬菜405
样品名称 (Sample Name):	石斑鱼 水11村大果 (处理3)
样品编号 (Sample No.):	SJ3002000121003
包装情况 (Packaging Condition):	袋装-包装完好
检测日期 (Report Date):	2020年12月16日
检测日期 (Test Date):	2020年12月11日至2020年12月17日
检测项目 (Test Item):	硒含量
检测方法 (Method):	GB 5009.15-2014
单位 (Unit):	mg/kg
检测结果 (Result):	0.29
检测限 (LOD):	0.003
检测精度 (Precision):	0.003
检测标准 (Standard):	GB 5009.15-2014
检测结论 (Conclusion):	符合国家标准
审核人 (Assessor):	于静
授权人 (Authority):	李洪明

Applied 8kg/mu

Selenium 0.29
Cadmium 0.17

Citrus effect



Location: Ganzhou, Jiangxi Province

Citrus trees have robust drought resistance and water retention



4.1 从果实的产量指标和果型指标来看, 习惯施肥基础上追施兰晶多微稀土矿物质原粉+再喷施含硒微量元素水溶肥的处理无论是挂果数、单果重还是脐径都优于习惯施肥处理, 提高幅度分别为 11.76%、19.35%、6.77%; 习惯施肥基础上追施兰晶多微稀土矿物质原粉+再喷施含硒微量元素水溶肥处理增长 32.25%; 习惯施肥基础上追施兰晶多微稀土矿物质原粉+再喷施含硒微量元素水溶肥的处理单果重较习惯施肥处理增长 30.64%。三个处理的果实平均脐径陷入了优质果范围, 习惯施肥处理为基准果。

4.2 从可溶性固形物、可溶性糖、Vc、可溶性有机质等品质指标来看, 三个处理处理即可溶性糖含量较习惯施肥分别显著性提高 21.63%、15.40%、21.63%。习惯施肥基础上追施兰晶多微稀土矿物质原粉+再喷施含硒微量元素水溶肥的处理即可溶性固形物显著性优于习惯施肥基础上追施兰晶多微稀土矿物质原粉+再喷施含硒微量元素水溶肥处理, 提高幅度为 11.43%。三个处理与习惯施肥在可溶性糖、可溶性糖、Vc 含量方面没有差异。

4.3 从固酸比、鞣酸比、可食率来看, 三个处理的鞣酸比、可食率显著性优于习惯施肥处理, 但三个处理间没有差异。鞣酸比方面, 习惯施肥基础上追施兰晶多微稀土矿物质原粉+再喷施含硒微量元素水溶肥处理提高 16.39%。习惯施肥基础上追施兰晶多微稀土矿物质原粉+再喷施含硒微量元素水溶肥处理较习惯施肥提高 19.47%。可食率方面, 习惯施肥基础上追施兰晶多微稀土矿物质原粉+再喷施含硒微量元素水溶肥处理提高 11.68%。习惯施肥基础上追施兰晶多微稀土矿物质原粉+再喷施含硒微量元素水溶肥处理较习惯施肥提高 18.57%。习惯施肥基础上追施兰晶多微稀土矿物质原粉+再喷施含硒微量元素水溶肥处理较习惯施肥提高 14.17%。固酸比方面, 三个处理与习惯施肥处理间没有差异。

4.4 习惯施肥基础上追施兰晶多微稀土矿物质原粉+再喷施含硒微量元素水溶肥处理脐径果实总磷含量达到了亩增产标准。实施方案为: 5 月下旬第一次生理落果期每株喷施 2 千克兰晶多微稀土矿物质原粉, 一周后每株第二次喷施 1.33 mL 赛苗旺 (稀释 750 倍, 下同), 8 月中旬果实膨大期每株第二次喷施 1.33 mL 赛苗旺, 10 月中旬果实转色期每株第三次喷施 1.33 mL 赛苗旺。

报告结束



1

Test unit
Shanghai Tech. Chemical Industry Testing Co., Ltd.
Ganzhou Citrus Research Institute

2

Test variety
Newhall navel orange

3

Conclusion
All indicators higher than control group
Habitual fertilization treatment



First and second place in the Potato Anti-Repetition Competition in Huangzhong District, Xining, Qinghai



Treatment	Sub-plot Yield (kg)				Yield per mu (kg)	Compared to Treatment 8 (±)	Ranking
	I	II	III	Average			
1	140.8	125.4	99.8	122	2075.04	-7.56	7
2	108.1	142.7	103.7	118.17	1952.04	-130.56	8
3	131.7	134.6	191.8	152.7	2566.39	483.79	3
4	129.2	149.4	199.8	159.47	2638.21	555.61	2
5	111.1	120.3	130.7	120.7	2264.02	181.42	5
6	157.7	135.8	103.6	132.37	2453	370.4	4
7	134	111.3	192.2	145.83	2967.04	884.44	1
8	161.2	126.3	117.8	135.1	2082.6	0	6

Treatment	Sub-plot Yield (kg)				Yield per mu (kg)	Compared to Treatment 8 (±)	Ranking
	I	II	III	Average			
1	121.9	122.55	87.2	110.55	2433.16	-105.52	6
2	148.65	111.6	91.2	117.15	2483.56	-55.12	5
3	122.2	118.8	111.8	117.60	2593.80	55.12	3
4	126.25	125.15	114.4	121.93	2954.44	415.76	1
5	117.1	111.25	109.55	112.63	2349.69	-188.99	7
6	118.9	110.1	101.15	110.05	2195.36	-343.32	8
7	125.53	124.05	114.5	121.36	2674.11	135.43	2
8	125	125.83	110.15	120.33	2538.68	0	4

Lettuce effect

“

Location: Kunming, Yunnan Province

· Continuous cropping, leading to serious soil acidification, resulting in dead seedlings, good growth after conditioning, no dead seedlings

”



Tomato effect

“

Location: Mengzi, Yunan Province; Xining, Qinghai Province

- Improving the effectiveness against acid salt invasion
- For tomato plants in Xining, plant height and yield were high, with an increase in yield of 832.1 kg per mu, representing a growth rate of 16.6%

”



对照产品

多微矿物菌剂

兰晶
LANJING



经纬度: 101.684409
 纬度: 36.527063
 地址: 青海省西宁市城中区总
 丹公路7号青海富昊饲料有限公
 司
 时间: 2023-09-01 09:55:58
 海拔: 2462.6米
 天气: 8~24℃ 北风
 备注: 长按水印编辑备注: J八



经纬度: 101.684960
 纬度: 36.526314
 地址: 青海省西宁市城中区南
 川工业园青海富昊饲料有限公
 司
 时间: 正在获取中
 海拔: 2460.8米
 天气: 天气获取失败
 备注: 长按水印编辑备注



经纬度: 101.685116
 纬度: 36.526308
 地址: 青海省西宁市城中区锦
 川大道9号青海富昊饲料有限公
 司
 时间: 2023-05-27 14:46:03
 海拔: 2470.6米
 天气: 11~13℃ 东风
 备注: 长按水印编辑备注



经纬度: 101.684557
 纬度: 36.527014
 地址: 青海省西宁市城中区锦
 川大道11号青海富昊饲料有限
 公司
 时间: 2023-09-01 09:56:29
 海拔: 2463.6米
 天气: 8~24℃ 北风
 备注: 长按水印编辑备注: J八



经纬度: 101.685126
 纬度: 36.526302
 地址: 青海省西宁市城中区锦
 川大道11号青海富昊饲料有限
 公司
 时间: 正在获取中
 海拔: 2457.3米
 天气: 15~22℃ 东北风
 备注: 长按水印编辑备注



经纬度: 101.685126
 纬度: 36.526302
 地址: 青海省西宁市城中区锦
 川大道11号青海富昊饲料有限
 公司
 时间: 正在获取中
 海拔: 2457.3米
 天气: 15~22℃ 东北风
 备注: 长按水印编辑备注

Tea effect

“

Location: Anji, Jiangsu Province

· Thicker and sturdier leaves, with emerald green color

”

多壮厚挺 茶香瑰宝PK 卷黄斑瘦



The tea soup is transparent and has a beautiful color
The water quality is gentle and smoother to the mouth
Elegance, fragrance, and no impurities



Effect of scallion, ginger, and garlic

“

📍 Location: Shandong Region
· The comparison effects on root systems and yield are significant ”



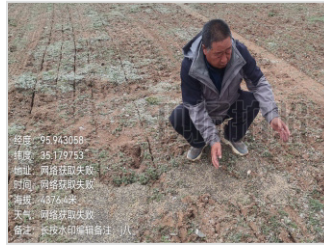
07

Lanjing grassland restoration demonstration area

1

The degraded grassland restoration Demonstration area of Rima Village, Shanglaxiu Township, Yushu Prefecture, Qinghai Province

Planted on 2024-07-04 (At the headwaters of the Yellow River, with an altitude of over 4600 meters, 1070 kilometers away from Xining)



Follow-up on 2024-07-28



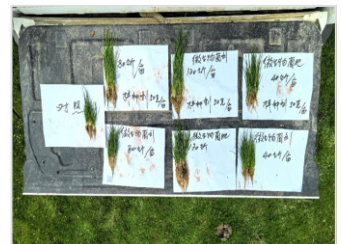
2

Ecological protection Demonstration zone of Riging Village, Jiajibolo Town, Zhiduo County, Yushu Prefecture, Qinghai Province

Planted on 2024-06-03 (At an altitude of over 4300 meters, the forage grass had grown for 50 days by the time of the follow-up visit)



Follow-up on 2024-07-22



3

The degraded grassland restoration Demonstration area of Rima Village, Shanglaxiu Township, Yushu Prefecture, Qinghai Province

Planted on 2024-06-26 (At an altitude of over 4000 meters)



Follow-up on 2024-07-23



4

Erisongduo Village (Topdressing) Demonstration zone, Mendang Township, Bangor County, Nagqu City, Tibet

Planted on 2024-06-19 (Average altitude of approximately over 4800 meters, fertilizer demonstration trial)



Follow-up on 2024-07-30



5 Grassland restoration Demonstration zone of Cuoike Village, Beila Town, Bangor County, Nagqu City, Tibet

Planted on 2024-06-17 (Average altitude of approximately over 4700 meters, restoration demonstration trial)



Follow-up on 2024-07-31



6 Restoration project of degraded alpine meadow in Wairiga village, Meule Town, Qilian County, Qinghai University

Established on 2023-05-05 (Year one), with an average annual temperature ranging from -7.4°C to 2.1°C at an altitude of 3590 to 3876 meters



Follow-up on 2024-08-01 (Year two)



CK Treatment 2 Treatment 3 Treatment 4 Treatment 5

First Year: 2023-08



Second Year: 2024-08

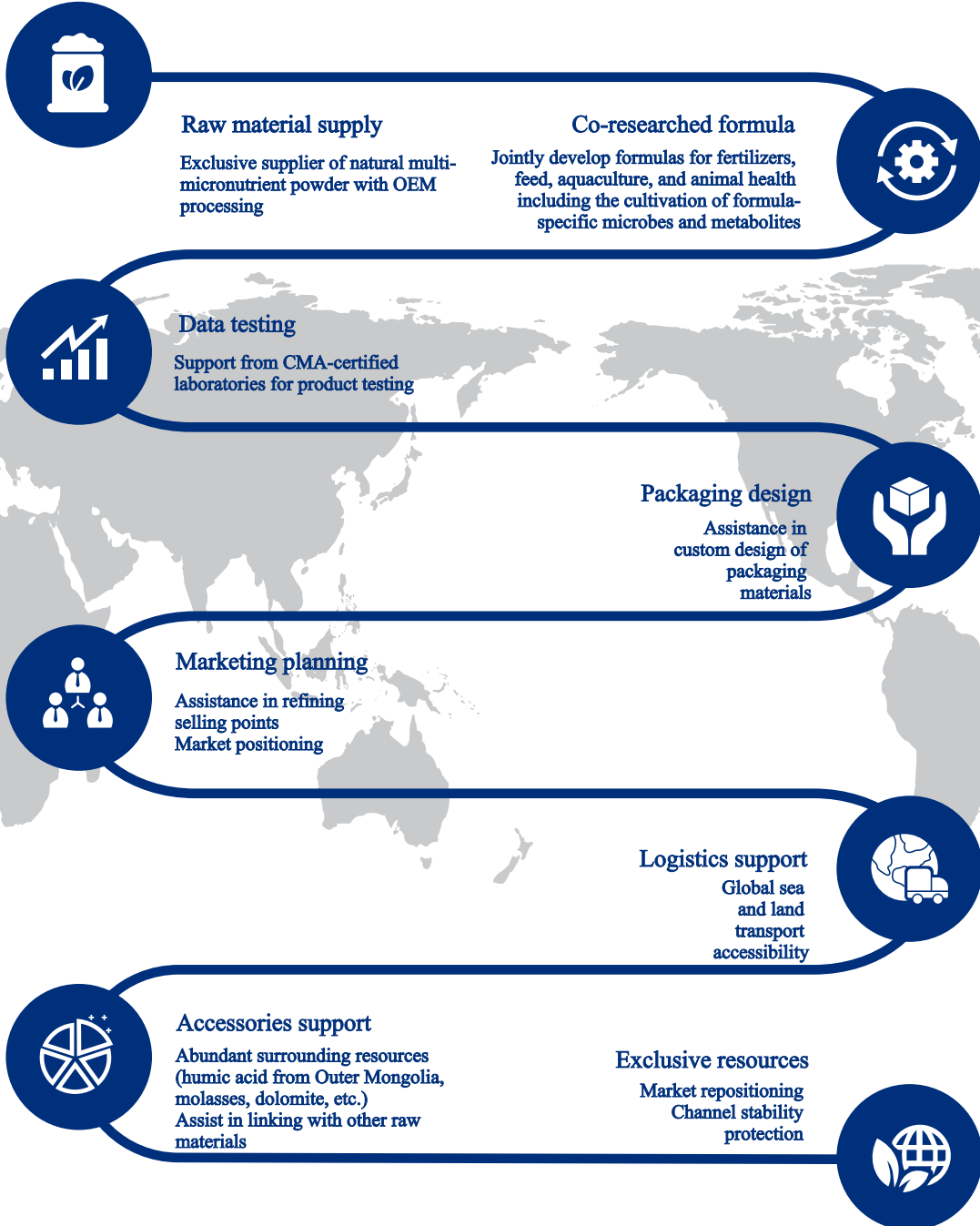


Effect of soy

“ Location: Heilongjiang
Abundant pod quantity, tall growth, and robust plant health
”



“ Lanjing Ecological One-Stop Service Empowers Partners ”



Completed activation techniques
High-temperature activation
Steaming cultivation techniques



Inner Mongolia Lanjing Ecological Technology Co., Ltd

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Inner Mongolia Autonomous Region