



2024

MEIHUA HOLDINGS GROUP CO., LTD.
ENVIRONMENTAL, SOCIAL
AND GOVERNANCE (ESG) REPORT

CONTENTS

Introduction

About This Report	01
Message from Chairman	05
About Meihua Group	07

Appendix

ESG data sheets	103
Benchmark Index Table	114

01 ESG Governance

Sustainable development strategy	15
ESG statement of the Board	19
ESG compliance governance	19
Main achievements in ESG	20
Dual importance assessment of issues	21

02 Prioritizing Products

Product and service safety and quality	27
Customer rights protection	37
Data security and customer privacy protection	38
Innovation-driven development and technology ethics	39

03 Environmental Protection

Addressing climate change	49
Environmental compliance management	57
Green packaging materials	66
Biodiversity conservation	66

04 Social Responsibility

Supply chain security	69
Human resources management	74
Work safety	85
Rural revitalization and social contribution	93

05 Business Ethics and Anti-corruption

Business ethics and anti-corruption management system	99
Business ethics and anti-corruption whistleblowing mechanism	100
Business ethics and anti-Corruption management measures	101
Key indicators	102
Supplier anti-corruption management	102

About This Report

This is the third environmental, social, and governance (ESG) report released by Meihua Holdings Group Co., Ltd. (hereinafter referred to as "this Report"), which outlines the Company's strategic sustainability goals, mission, and commitments, as well as significant initiatives and outstanding performance in the fields of ESG. It aims to disclose the Company's ESG practices and achievements to key stakeholders.

Organizational Boundaries

Unless otherwise specified, this Report covers Meihua Holdings Group Co., Ltd. and all its subsidiaries.

Reporting Period

This Report primarily covers the year 2024 (from January 1, 2024 to December 31, 2024), with some appropriate retrospective disclosures to ensure the coherence of the information and data.

Preparation Basis

Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies—Sustainability Report (Trial)
 Guide No. 4 of the Shanghai Stock Exchange for Self-Regulation of Listed Companies—Preparation of Sustainable Development Reports
 Global Reporting Initiative's Sustainability Reporting Standards (GRI Standards)
 International Financial Reporting Standards for Sustainability Disclosure No. 1—General Requirements for Disclosure of Sustainability-related Financial Information
 International Financial Reporting Standards for Sustainability Disclosure No. 2—Climate-related Disclosures
 Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)—Final Report
 SDG Compass: The Guide for Business Action on the SDGs issued by United Nations

Reporting Frequency

This Report is released once a year, consistent with the annual report.

Data Sources

The key financial data in this Report is derived from audited 2024 Annual Report of Meihua Holdings Group Co., Ltd. Other data is sourced from internal documents, audit reports, and other relevant materials of the company.

Unless otherwise specified, all currencies in this Report are expressed in RMB. The photos used in this Report have been authorized.

Title Description

For the convenience of presentation and reading, "Meihua Group," "the Company," "we," and "us" used herein refer to "Meihua Holdings Group Co., Ltd.," "Tongliao Base," "Xinjiang Base," and "Jilin Base" used herein refer to the production bases of its three wholly-owned subsidiaries: "Tongliao Meihua Biological Technology Co., Ltd.," "Xinjiang Meihua Amino Acid Co., Ltd.," and "Jilin Meihua Amino Acid Co., Ltd."

Report Format

This Report is published in electronic format, and you can browse and download its Chinese and English electronic versions at the following websites: Meihua Group's official website (www.meihua.group); Shanghai Stock Exchange's website (www.sse.com.cn). If you have any questions or suggestions about this Report, please send an email to mhesg@meihuagrp.com or call 0316-2359652.

Language

This Report is written and published in Simplified Chinese and is also available in English. In case of discrepancies between different versions, the Chinese version shall prevail.



Message from Chairman

Dear partners, investors, colleagues, and friends from all walks of life,

2024 is a critical year for Meihua Group to deepen its ESG strategy and promote the deep integration of the concept of sustainable development into its business practices. In the face of global climate change, the reshaping of supply chain resilience, and the demand for high-quality development, we always adhere to the principles of pragmatism and truth-seeking, and we are committed to implementing ESG concepts throughout the entire chain of corporate operations to achieve synergistic growth of economic, environmental, and social values in the green transition. Here, on behalf of the Board of Directors, I would like to express my sincere gratitude to all partners who have supported the development of Meihua Group and share our practices and reflections.

I. Leading the industry's sustainable development with benchmarking practices

Over the past year, Meihua Group's efforts in the fields of ESG were widely recognized: the Company won the Best ESG Practice Award for Listed Companies at the China Track and ESG Sustainable Development Conference and was listed among Forbes China's Top 10 "ESG Inspirational Cases" for 2024. These have served not only as recognition of our long-term investment, but also as an incentive for us to keep moving forward.

We understand that the sustainable development of an enterprise requires the collaborative industry efforts. To this end, the Company has been deeply involved in the formulation of standards such as the ESG Disclosure Guidelines for Chinese Bio-fermentation Enterprises and the ESG Evaluation Guidelines for Chinese Bio-fermentation Enterprises led by organizations such as the China Biotech Fermentation Industry Association, providing a replicable "Meihua Solution" for building a standardized, transparent, and sustainable industrial ecosystem.

II. Strengthening the foundation of responsibility with systematic governance

At the governance level, adhering to the dual-wheel strategy of "international standards + local practices," we have achieved full coverage of the ISO 14001 Environmental Management System and ISO 45001 Occupational Health and Safety Management Systems, and passed the ISO 37001 Anti-bribery Management System Certification in February 2024, laying a solid institutional foundation for responsible governance.

We have always emphasized that ESG is not an add-on to our business, but an action plan that is deeply integrated with our strategic decisions, management, and resource allocation. In 2024, under the guidance of the Board of Directors, we actively promoted the close integration of sustainability indicators into our business priorities; continued to optimize the sustainability governance structure and align it with the management system of the Company; and cooperated with experts in various fields to discuss key issues such as climate change and supply chain ESG management, so as to ensure that our ESG strategy resonates with our business development through systematic deployment.

III. Driving green transformation with technological innovation

Under the guidance of the "carbon peaking and carbon neutrality" goals, the Company insists on the technological breakthrough as the core driving force of green development, and continues to increase the investment in green technology. In 2024, the Company added 39 new authorized patents, contributing technological momentum to the "carbon peaking and carbon neutrality" goals; the xanthan gum product of Jilin Base and the MSG product of Tongliao Base received both carbon footprint and water footprint certifications, marking a new level in the management of the entire lifecycle from raw materials to end products; and two subsidiaries of the Company, Jilin Meihua Amino Acid Co., Ltd. and Tongliao Meihua Biological Technology Co., Ltd., were recognized as National Benchmark Enterprises for Energy Conservation and Environmental Protection in the Biological Fermentation Industry. We will continue to make scientific and technological innovation our core driving force for promoting the green transition of the Company.

IV. Creating shared value through responsible cooperation

We have always regarded social responsibility as an important dimension of our corporate mission. In 2024, the Company donated RMB 2,458,750 through channels such as education support, rural revitalization, and disaster relief to actively fulfill our social responsibility. In the future, we will also launch a dedicated "Supply Chain ESG Management" project to extend the responsibility to the upstream and downstream of the industrial chain, achieving value sharing.

Looking ahead: moving towards sustainability at a more determined pace

Looking ahead to 2025, the company will focus on three strategic initiatives: "Addressing Climate Change", "Carbon Neutrality and Strategic Planning", and "Supplier ESG Management". These will be advanced through targeted projects to drive breakthroughs in key areas — from strategic planning and technological innovation to ecosystem collaboration — building a multidimensional responsibility network spanning "internal operations, industry chains, and communities". This will ensure the full integration of ESG principles across business operations.

We firmly believe that sustainable development is the foundation of an enterprise. Meihua Group will push forward the ESG strategy with stronger determination, and turn our commitment into quantifiable and traceable results. We look forward to working with all parties to draw a green blueprint for high-quality development!

Chairman of Meihua Holdings Group Co., Ltd.

Wang Aijun

March 2025

About Meihua Group

Company Profile



As a full-chain synthetic biology pioneer company deeply engaged in the field of amino acid, the Company always focuses on the large-scale production and innovative application of amino acid. Adhering to the "Amino Acid +" development strategy, the Company has continuously expanded its product matrix and business landscape since its establishment, and has now built a complete industrial ecosystem covering livestock nutrition amino acids (lysine, threonine, valine, and other series products), food flavor enhancers (MSG, disodium guanylate and disodium inosinate, and other flavor enhancers), pharmaceutical-grade amino acids (glutamine, proline, and other medicinal raw materials), colloidal polysaccharides (Xanthan Gum, trehalose), and bulk byproducts (corn germ, protein powder, etc.).

The Company implements an integrated R&D, production and sales business model. After more than 20 years of hard work and continuous innovation, it has now become one of the world's largest amino acid manufacturers and can flexibly meet the differentiated needs of different customers around the world.

With a future-oriented vision, adhering to the strategy of "Single Focus, Dual Drives, Three Persistences". Meihua Group will further focus on the high-quality development of its main business, be driven by both technology and management, and persist in creating and sharing value and putting customers first on an integrity foundation, thereby striving to become a leader in synthetic biology.

Our future: Focused on Becoming a World Leading Enterprise in Synthetic Biology

MEIHUA

Single Focus

We aim at achieving high-quality growth in our core business and becoming a leader in bio economy

Dual Drives

We are driven by Technological Innovation and Outstanding Management

Three Persistences

We uphold the principles of Co-Creation, Customer-Centeredness, and Integrity

2024 Operating income: RMB 25.069 billion Net profit: RMB 2.74 billion

Relying on three modern production bases in Tongliao, Inner Mongolia, Wujiaqu, Xinjiang, and Baicheng, Jilin, as well as two R&D and innovation centers in Langfang and Shanghai, the Company has formed a full industrial chain layout covering R&D, production, and sales. The Company's core competence runs through every key link from strain design and build, to fermentation, separation and extraction, and then to product moulding, which builds up a complete and efficient industrial closed loop. Among them, the production capacity and technical level of core products such as lysine, MSG, threonine, xanthan gum, disodium guanylate and disodium inosinate, and pharmaceutical amino acids rank among the top in the global industry, demonstrating the Company's outstanding strength and market leadership in the field of amino acids.

The products produced by the Company include:

Amino acid products for livestock nutrition

Lysine, threonine, tryptophan, feed grade valine, residue of MSG, starch byproduct-based feed fiber, corn germs, microbial protein, etc.

Taste optimization products for food

Glutamic acid, glutamic acid sodium, disodium guanylate, disodium inosinate, food-grade xanthan gum, trehalose, natamycin, etc.

Pharmaceutical amino acids for human

Glutamine, proline, leucine, isoleucine, pharmaceutical-grade valine, inosine, guanosine, adenosine, pullulan polysaccharide, and vitamin B2, etc.

Other fields

Industrial-grade xanthan gum, bioorganic fertilizers, etc.

Corporate Culture

Strategic Goal

Focused on becoming a world leading enterprise in synthetic biology

Core Values

Our success thrives on integrity, diligence, honesty, and harmony.



Key ESG Performance in 2024

ESG

MSCI rating: B

In December 2024, Meihua Group received the Best ESG Practice Award for Listed Companies at the China Track and ESG Sustainable Development Conference

In 2024, Meihua Group participated in the development of ESG Disclosure Guidelines for Chinese Bio-fermentation Enterprises and the ESG Evaluation Guidelines for Chinese Bio-fermentation Enterprises led by the China Biotech Fermentation Industry Association

Corporate Governance (Business Ethics and Anti-corruption)

In February 2024, Meihua Group successfully passed the ISO 37001 anti-bribery management system certification

0

Number of cases involving corruption concluded

0

Number of business ethics and anti-corruption reports

0

Number of cases involving commercial ethics concluded

Growing Together with the Employees

0

Human rights violation

36%

Proportion of female senior executives

90%

Human rights assessment coverage of employees

225.15h

The average training hours per employee

3.91

Overall employee satisfaction score (full score is 5 points)

97.73%

The training ratio of all employees

100%

Scope of ISO 45001 Occupational Health and Safety Management System Certification

Addressing Climate Change

304,874,044.71 Kwh

Clean energy usage

42%

Coverage of supplier carbon reduction program

In January 2024, the Xanthan Gum products (industrial grade + food grade) of the Jilin Base obtained carbon footprint certification

In December 2024, the MSG products of the Tongliao Base obtained carbon footprint and water footprint certifications



Leading Products

100%

Finished product qualification rate

100%

Product quality certification coverage

99.80%

Product testing pass rate

100%

Scope of disclosure of hazardous chemicals

100%

Scope of chemical hazard assessment

RMB 733 million

Amount of R&D investment

3.13%

Proportion of R&D personnel to the total number of employees of the Company

2.93%

Proportion of R&D investment to income from primary business

402

Number of R&D personnel

160

Number of valid invention patents during the reporting period

39

Number of newly authorized patents in 2024

93.85

Customer satisfaction (full score is 100 points)

0

Number of data security and privacy leakage incidents



Environmental Protection

RMB 68.51 million

Investment in environmental protection during the reporting period

100%

Coverage of ISO 14001 Environmental Management System Certification

0

Environmental violations

0

Water-related violations

120 tons

As of the end of 2024, the total weight of all types of packaging materials reduced by



Social Contribution

100%

Proportion of products with raw materials traceable to the place of origin

76%

Proportion of suppliers signing the Supplier Code of Conduct

2.46million RMB

Total amount of social donations

2,765 people

Number of beneficiaries of rural revitalization measures

351,555 hours

Hours of participation in employee volunteer activities

About Meihua Group



Important Honors in 2024



Best ESG Practice Award
for Listed Companies in
2024



No. 16 of the Top 100
Privately-owned
Companies in Hebei
Province for Invention
Patents in 2024



No. 18 of the Top 100
Privately-owned
Companies in Hebei
Province for R&D
Investment in 2024



No. 30 of the Top 100
Privately-owned
Manufacturing
Companies in Hebei
Province in 2024



No. 34 of the Top 100
Privately-owned
Companies in Hebei
Province in 2024



Jilin-National
Benchmark Enterprise
for Energy Conservation
and Environmental
Protection in the
Biological Fermentation
Industry



Tongliao-National
Benchmark Enterprise
for Energy-saving and
Environmental
Protection in the
Biological Fermentation
Industry



National Amino Acid
Industry Testing and
Analysis Center (Langfang)



Xinjiang-Water-saving
Enterprises



Xinjiang-Top 100 Industrial
Enterprises in XPCC



Tongliao-No. 32 of the Top
100 Privately-owned
Companies in Inner
Mongolia



Tongliao-No. 23 of the Top
50 Privately-owned
Manufacturing Companies
in Inner Mongolia



Tongliao - Behavioral Style
Observation Point



Jilin-High-tech Enterprises



Jilin-Provincial Leading
Enterprises in Agricultural
Industrialization

01

ESG Governance

Meihua Group has always regarded ESG governance as an important engine for the high-quality development of an enterprise. In the face of the iteration of global governance rules and the upgrading of stakeholders' demands, under the guidance of the Board of Directors' strategy, we have, with compliance as the bottom line and value creation as the guide, constantly optimized the whole chain of governance structure and system, deeply integrated ESG elements into corporate governance, and continued to promote the modernization of the Company's governance capability to create sound and sustainable long-term value for our stakeholders.

❖ Sustainable development strategy	15
❖ ESG statement of the Board	19
❖ ESG compliance governance	19
❖ Main achievements in ESG	20
❖ Dual importance assessment of issues	21



Sustainable Development Strategy

Meihua Group combined the beautiful vision of "focusing on biotechnology and creating a better future" with the concept of sustainable development. The analysis was carried out through four strategic levels, including the direction level, target level, path level, and demand level, which covered the external environment and background analysis, industry demand and peer benchmark analysis, the analysis of stakeholders' demands, and the analysis of the Company's strategic development needs. It was combined with the United Nations' sustainable development goals (SDGs). In the end, we built our strategy of "Nurturing the Future GROWTH".



| SDGs

We obtain resources we need from the nature. Through the development of synthetic biotechnology, we produce all kinds of amino acid products to ensure people's healthy lives and promote human's sustainable development. It allows each of us to care about and improve the environment, achieving harmonious co-existence.

| Sustainable Development Pillars

On the path of achieving a harmonious future for both people and the environment, we need to take specific and effective actions to ensure the realization of Meihua Group's ultimate goal.

In addition, we focus on both the internal and external perspectives of the Company. Starting from ourselves, we do our best to pursue higher action results, extend to our external world through the value chain, and promote the sustainable development of industry and society through cooperation to achieve the best action results.

The green action route

The green action route is our bottom line, which guarantees that we minimize the impact on the natural environment and is the foundation of our development

The responsibility action route

The responsibility action route is our foundation; it ensures that our trust with stakeholders continues to deepen and is the premise for our joint progress

The low-carbon action route

The low-carbon action route is our direction, which helps us remain resilient in the face of the most significant risk of climate change and is the guarantee for us to clear future obstacles

The health action route

The health action route is our main battlefield, which ensures that we can maximize the impact of the Meihua Group and is the core of our pursuit of sustainable development

| Sustainable Development Foundation

The technology of synthetic biology is the starting point of Meihua Group and our sustainable development action. In addition, the process of sustainable development requires the cooperation of all stakeholders. In this process, we also hope to convey the concept of sustainable development to everyone.

Meihua Group focuses on being the world's leading amino acid enterprise, and actively integrates ESG into the Company's development strategy. We take into account the sustainable development of economy, society, and environment while pursuing economic growth. We continuously optimize and improve our ESG management system, and actively listen to and respond to stakeholders' opinions and needs. We are dedicated to mitigating the impact on the environment and society in the process of bio-fermentation and bio-pharmaceutical business, and striving for the long-term sustainable development of the Company.

Sustainable Development Management

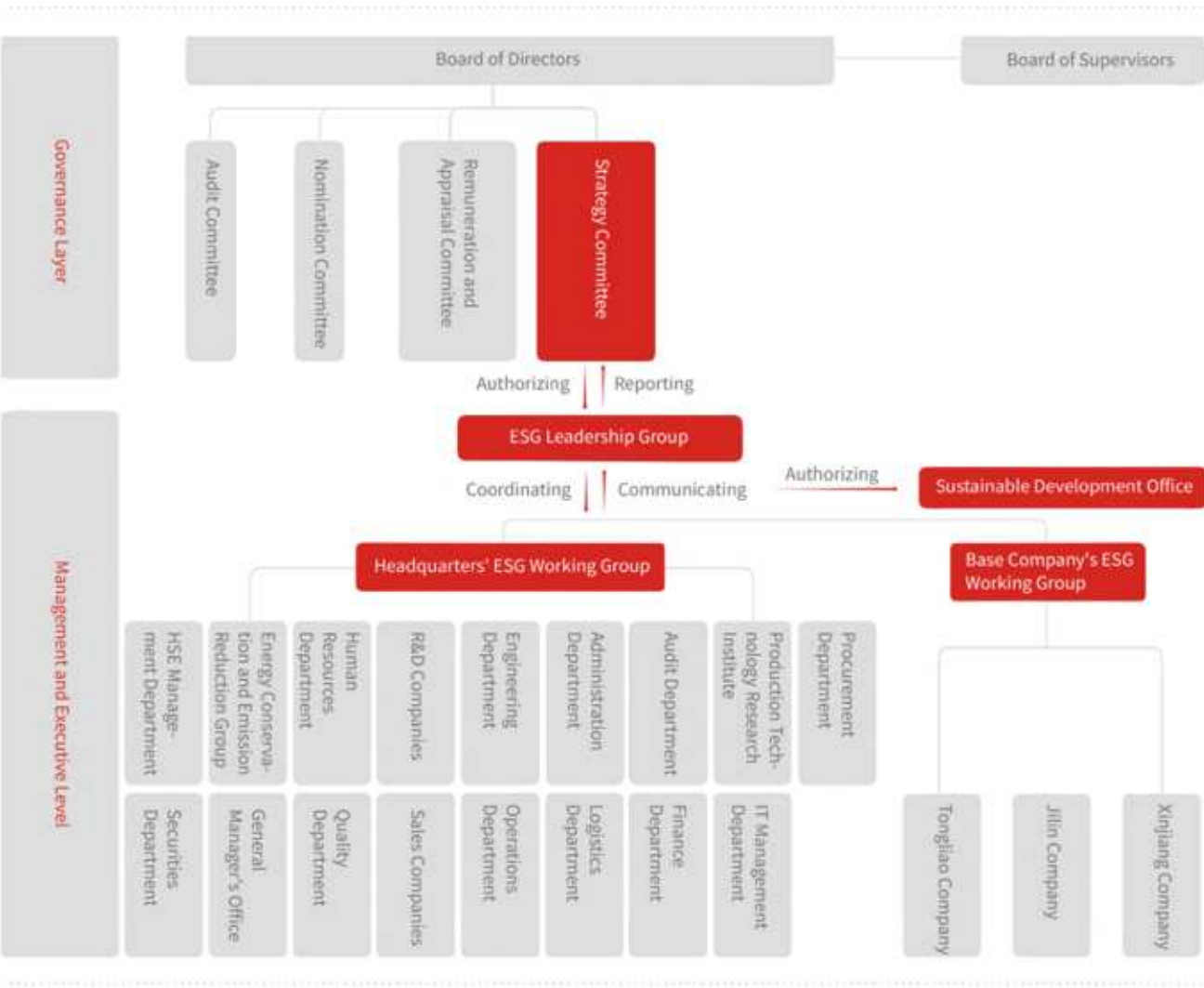
| ESG Governance System

To ensure the effective implementation of the Company's ESG development strategy, the Board of Directors has established a Strategy Committee that continuously monitors and ensures the effective implementation of sustainable development-related strategies, goals, and policies, and regularly reports to the Board of Directors, providing comprehensive data support and analytical basis for the Board of Directors to make decision.

The Strategy Committee of the Company's Board of Directors has established an ESG Leadership Group, authorized the Sustainable Development Office as the dedicated department for sustainable development, responsible for promoting ESG concepts, project establishment, and performance management, strongly driving the implementation of the Company's sustainable development strategy. Meanwhile, led by the Sustainable Development Office, the Company has established a cross-departmental ESG coordination mechanism in the form of an ESG Working Group, which gradually integrates ESG concepts into the routine management of departments in a top-down manner, promotes the execution and implementation of the ESG strategy, and thereby enhances ESG management levels at the source of business.

Meihua Group continuously implements ESG-related work based on the Environmental, Social, and Governance (ESG) Rules of Meihua Holdings Group Co., Ltd. The Sustainable Development Office continuously monitors policy needs, regularly updates and improves the indicator database, and collaborates with various business departments to integrate ESG concepts into the Company's entire industrial chain operation management, continuously strengthening ESG organizational rights and responsibilities.

Meihua Group's ESG Governance Structure



Performance of the Board of Directors

During the reporting period, the Company held 3 meetings of the shareholders, 9 meetings of the Board of Directors and 6 meetings of the Board of Supervisors. The Board of Directors deliberated a total of 58 topics or items, of which 1 was related to ESG.

ESG Governance Measures

In 2024, guided by the Company's ESG strategy, the Sustainable Development Office carried out the sustainable development practices throughout the entire operational chain, taking into account the actual business of the Company and using the indicator management system as a starting point.

Senior leadership
Implementation of
ESG strategy

The Company's Chairman personally participates in and promotes key sustainable development projects, collaborates with experts from various fields to deeply discuss key topics such as climate change and supply chain ESG management, and clarifies plans for advancing relevant specialized areas to continuously implement the sustainable development strategy.

Internal and external benchmarking
Optimization of
indicator system

Continuously monitor changes in domestic and international accounting standards, exchange regulatory requirements, and ESG rating standards, while continuously optimizing the ESG Indicator Management System of Meihua Holdings Group Co., Ltd. to guide the Company's ESG management.

Business integration
Strengthening
ESG management

Align business operations precisely with the ESG indicator system, deeply integrate the concept of sustainable development into various business lines through enhanced training, orderly carry out ESG practice work, and continuously strengthen the normalization of ESG management.

Information transparency
Strengthening
internal and external communication

Timely disclose the Company's progress in sustainable development to the public and actively respond to and participate in communication activities of various platforms and institutions.

Roles and Responsibilities of Members of the Board of Directors

Composition of the Board of Directors	Name	Wang Aijun	He Jun	Liang Yubo	Lu Chuang	Liu Xinghua
	Position	Chairman	Director and General Manager	Director and Deputy General Manager	Independent director	Independent director
	Gender	Female	Male	Male	Male	Male
	Age	53	51	61	45	58

ESG statement of the Board

| Commitment by the Board of Directors

The Company and the Board of Directors always adhere to compliance governance and steady development, strictly follow the Code of Corporate Governance for Listed Companies of the China Securities Regulatory Commission and the various requirements of the Shanghai Stock Exchange to continuously improve the ESG management system. The Board of Directors attaches great importance to the significant role of ESG in the Company's long-term development, actively fulfills its supervisory and decision-making responsibilities, continuously strengthens its supervision and participation in the Company's ESG affairs, and actively integrates ESG concepts into the Company's development strategy, major decisions, operational management, and risk control system, so as to promote the Company's steady progress on the path of sustainable development, and to create greater value for its shareholders, employees, partners, and society.

| Board of Directors' Statement

This Report is published by Meihua Group for the third year, and aims to present the efforts and achievements of Meihua Group in the fields of sustainability, including environment, labor and community, and value chain, to all stakeholders in an objective, standardized, transparent, and comprehensive manner. The Company always insists on integrating ESG concepts into its business operations and strategic layout, continuously optimizing the governance system, and enhancing the Company's risk management capabilities to achieve long-term stable development.

The Company's Board of Directors places great importance on ESG governance, incorporates ESG into the responsibilities of the Strategy Committee, and regularly reviews relevant policies, goals, and implementation progress to ensure that various sustainable development measures are effectively promoted. The Company will continue to strengthen information disclosure, actively communicate with stakeholders, and continuously improve ESG management levels to support high-quality corporate development.

This Report discloses in detail and truthfully the progress and achievements of Meihua Group's ESG work in 2024 and was considered and approved by the Board of Directors on March 17, 2025.

ESG Compliance Governance

Meihua Group has always adhered to the principle of standardized operations, has continuously optimized its corporate governance system in strict accordance with the Company Law of the People's Republic of China, the Securities Law of the People's Republic of China, the Code of Corporate Governance for Listed Companies, and relevant laws and regulations, and has formulated the General Meeting of Shareholders Rules of Procedure, the Board of Directors Rules of Procedure, the Board of Supervisors Rules of Procedure, and the Independent Director Working System. etc., defining the roles, responsibilities and working procedures of the General Meeting of Shareholders, the Board of Directors, the Board of Supervisors, and the management, so as to continuously standardize work processes, and effectively enhance the operational efficiency of the Board of Directors. The Company strictly fulfils its information disclosure obligations in accordance with the Information Disclosure Management System, actively carries out investor relationship management, strengthens interactive exchanges with investors, and fully guarantees investors' right to equal access to Company's information. In order to effectively respond to various risks arising from changes in the external environment, the Company gradually integrates ESG concepts into all aspects of its management. By establishing a sound risk prevention and control mechanism, the Company continuously improves its compliance governance level, laying a solid foundation for sustainable development.

Main Achievements in ESG

| Participation in the Formulation of ESG Industry Standards

Date of Release	Released by	Name of Standard
December 2022	China Biotech Fermentation Industry Association	Greenhouse Gas Emission Accounting and Reporting Requirements—Bio-fermentation Production Enterprises
July 2023	Inner Mongolia Autonomous Region	Energy Consumption Quota for MSG Unit Products
December 2023	China Biotech Fermentation Industry Association	Evaluation Standard of Energy-saving and Environmental Protection Benchmark Enterprises in Bio-fermentation Industry
December 2023	State Administration for Market Regulation National Standardization Administration	Water-saving Enterprise Fermenting Industry (GB/T 32165-2023)
2024 (not yet publicly available)	China Biotech Fermentation Industry Association	ESG Disclosure Guidelines for Chinese Bio-fermentation Enterprises ESG Evaluation Guidelines for Chinese Bio-fermentation Enterprises

| Results of ESG Rating



| Honorary Awards



Dual Materiality Assessment of Topics

Communication with Stakeholders

All along, Meihua Group had been paying close attention to the needs and suggestions of the stakeholders, continuously improving its diversified stakeholder engagement mechanisms and communication methods to better understand stakeholder demands and accept their supervision.

The Company communicated with various stakeholders through various online and offline channels to understand their concerns and expectations, thereby helping the Company accurately assess the impact of its decisions, timely adjust its strategic direction, clarify its sustainable development strategy and material topics, and ensure that the Company's ESG practices meet the needs of actual development, achieving sustainable, high-standard, and high-quality growth.

Stakeholders	Expectations and Requirements	Communication and Response Methods
Shareholders and investors	<ul style="list-style-type: none"> Returns and growth Risk control Corporate governance Regularly disclose business information General Meeting of Shareholders Report and announcement Return to shareholders positively 	<ul style="list-style-type: none"> General Meeting of Shareholders Briefing Media communication Internal communication Mail Official website Annual report SSE e-interaction
Employees	<ul style="list-style-type: none"> Wages and benefits Health and safety Smooth communication Fair promotion and development opportunities Pay wages on time Pay social security contribution Establish an OHS management system Improve career development channels Organize employee training 	<ul style="list-style-type: none"> Questionnaire Workers' Congress Staff's sports and culture activities
Customers	<ul style="list-style-type: none"> High-quality products Satisfying customer experience Protect legitimate rights and interests Requirement/Satisfaction survey Customer complaint handling Annual review and assessment 	<ul style="list-style-type: none"> Customer survey Customer service Customer satisfaction management Official website Social media

Stakeholders	Expectations and Requirements	Communication and Response Methods
Suppliers contractors partners	<ul style="list-style-type: none"> Honor commitments Industry cooperation Open, fair, and impartial procurement Fulfill contract according to law Public bidding Carry out project cooperation Drive the healthy development of the industry 	<ul style="list-style-type: none"> Exchanges and visits Information disclosure
Community and the public	<ul style="list-style-type: none"> Support social development Care about vulnerable groups Health culture Energy conservation and emission reduction Public welfare and charity Green production Green building Green materials 	<ul style="list-style-type: none"> Exchanges and visits Information disclosure
Media	<ul style="list-style-type: none"> Economic performance Pollutant discharge Media project survey 	<ul style="list-style-type: none"> Information disclosure News platform Compliance platform Webinar

Materiality Analysis of Topics

In 2024, we once again conducted stakeholder survey to better understand stakeholders' concerns, expectations, and demands regarding the Company's sustainable development. We used questionnaire surveys and expert scoring methods to identify the Company's material topics from the dimensions of "financial materiality" and "impact materiality."



Establishing a list of topics

Based on the 21 topics specified in the Shanghai Stock Exchange's Sustainability Reporting Guidance, by reference to the internal indicator system developed according to GRI standards, TCFD framework, and SASB accounting standards, and in combination with peer benchmark analysis, we identified several material topics and established a list of sustainable development topics.



Impact materiality assessment

We used stakeholder survey methods such as questionnaire to collect internal and external information. We distributed questionnaires to stakeholders including customers, shareholders, suppliers, contractors, media, community representatives, and partners, request each stakeholder to score the materiality of the topic based on the scale, scope, and likelihood of impact, and collect relevant feedback.

Based on the questionnaire collection results, we assigned different weights to different stakeholders, calculated the impact materiality scores for the topics, ranked the topics according to the scores, and set an impact significance threshold to determine the impact materiality assessment results.



Financial materiality assessment

By using expert scoring methods, we asked department heads from the Finance Department, General Manager's Office, Chairman's Office, and other business departments to assess the scope, degree, and likelihood of the financial impact of the topics on the Company, and to identify and analyze the potential impact of the topics on the Company's financial situation in the short, medium, and long term.

Based on the financial impact assessment results, we conducted a comprehensive scoring of the financial materiality of the topics, then ranked the topics according to the scores, and set a financial materiality threshold to determine the financial materiality assessment results.



Dual materiality analysis

By summarizing the assessment results of impact materiality and financial materiality of the topics, we have drawn a scatter diagram of material topics, and determined the disclosure framework for the topics.



Determining the report structure

According to the results of the dual materiality assessment and the requirements of the Shanghai Stock Exchange's Sustainability Reporting Guidance, topics with financial materiality involved in this Report will be disclosed according to the four-element framework of governance, strategy, impact risk and opportunity management, and indicators and targets, while other topics will be disclosed according to regulatory requirements and the actual situation of the Company.



In this survey, we collected a total of 423 questionnaires, and completed the identification and evaluation of this year's topics of impact materiality according to the attention, expectations and needs of various stakeholders for the Company's ESG work, including 7 highly material topics, 9 medium-material topics and 4 low-material topics; and based on the analysis of the Company's business departments, completed the identification and evaluation of this year's topics of financial materiality, including 9 highly material topics, 3 medium-material topics and 8 low-material topics.

Scatter Diagram of Meihua Group's ESG Material Topics



Based on the results of the questionnaires, we will further adjust the direction of our ESG work in a timely manner, and continuously improve our own ESG performance to meet the expectations and requirements of our stakeholders.

02

Prioritizing Products



As a leading global provider of amino acid nutrition and health solutions, Meihua Group always regards product quality and customer service as a cornerstone for the survival and development of the Company. The Company continues to improve the whole-cycle management system covering R&D, production and customer service to ensure the product quality through the whole process of quality control; protects commercial secrets and customer privacy with standardized data security protection mechanisms; insists on attaching equal importance to innovation-driven and scientific and technological ethics, and meets customers' needs with high-quality products and services to continuously inject vitality into the high-quality development of global food and health industry.

- Product and service safety and quality 27
- Customer rights protection 37
- Data security and customer privacy protection 38
- Innovation-driven development and technology ethics 39

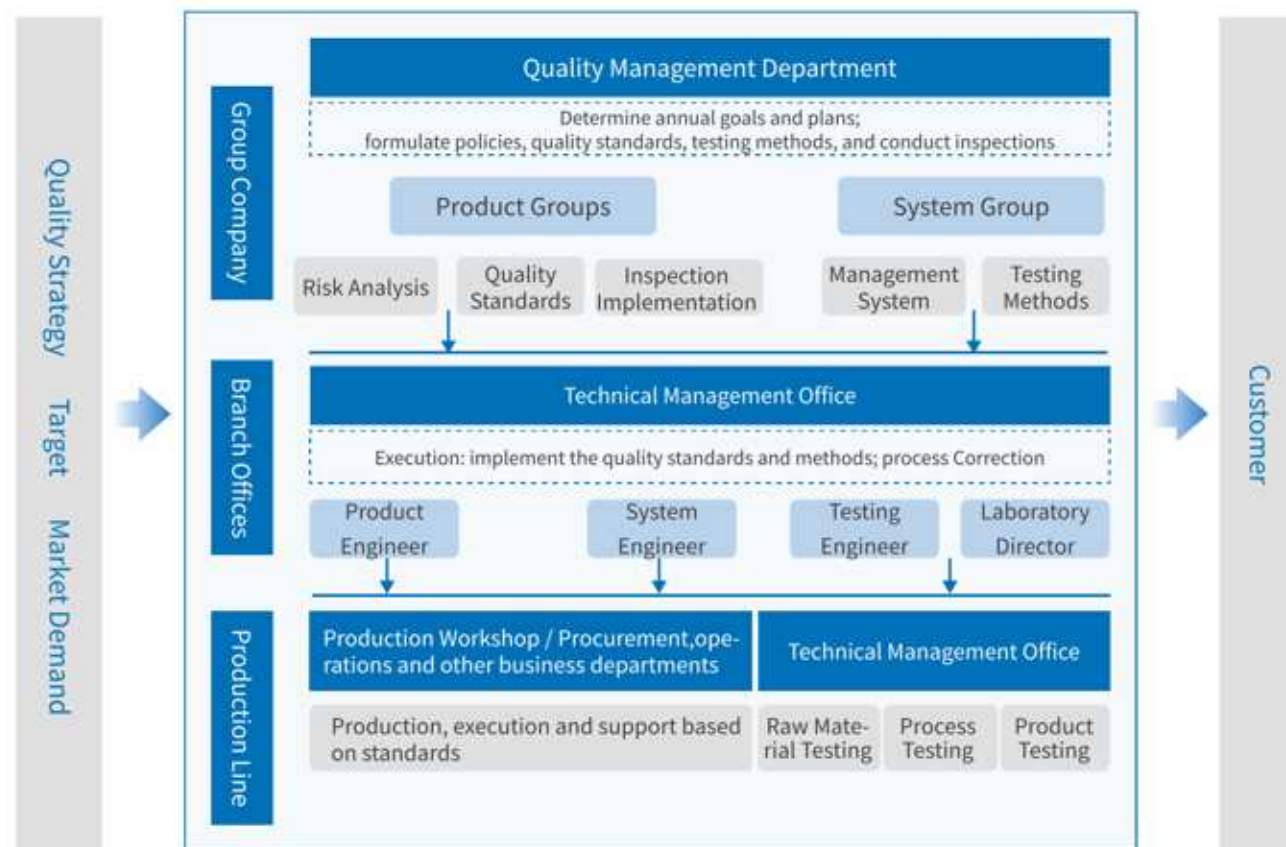


Product and Service Safety and Quality

As a leading global provider of amino acid nutrition and health solutions, Meihua Group always regards product quality and service as a cornerstone for the survival and development of the Company. In the process of continuously expanding production scale and market share, we constantly strengthen the quality and safety management system, relying on the rigorous R&D processes, the comprehensive quality system, and the continuously improving quality and safety risk prevention measures, we strictly implement quality control standards to provide customers with high-quality and trustworthy products and services. In 2024, we worked on three core directions of standardization of daily management, intelligent quality control, and full-process quality monitoring, and driven by technological innovation, we upgraded our quality and continuously optimized our quality management system to ensure safer, healthier, and higher quality products for global customers, contributing to the global food health industry.

Governance - Quality Governance Structure

The Company continuously deepens the construction of the quality management system, and has established a multi-level quality governance structure. This structure is approved and supervised by the General Manager of the Company, with coordination by the Production Technology Research Institute and the Quality Management Department, and implemented by the Technical Management Office at the production base, while continuously improving the quality management system to ensure that product quality commitments can be fulfilled.



Quality Management System

Quality is the red line and the lifeline of business development. The Company strictly abides by the relevant laws and regulations of the People's Republic of China, such as the Product Quality Law of the People's Republic of China, the Food Safety Law of the People's Republic of China, and the Regulation on the Administration of Feeds and Feed Additives. Based on the relevant management system standards such as the GB/T19001 Quality Management System Requirements, the ISO 22000 Food Safety Management System, the BRC Global Standards for Food Safety, the Company has formulated the Integrated Quality Management Manual and related procedure documents. In line with the Company's actual situation, the Company updates internal systems such as the Quality Standard of Materials and Excipient Materials, the Quality Standard of Products, and the Inspection Guide of Products every year, promoting the coordinated advancement of quality standardization and process management standardization. In addition, relying on the problem database system, the Company focuses on solving key quality issues in business management to ensure the efficient operation of the quality management system.

The Company continues to promote the supervision of quality certification and the replacement of certificates. All production bases effectively maintained the effective status of the certifications of the ISO 9001 Quality Management System, the ISO 22000 Food Safety Management System, BRC International Food Safety System, and the Feed Additive and Premixture System (FAMI-QS) of the EU.

In 2024, Tongliao Base obtained certification for the U.S. FSVP (Foreign Supplier Verification Programs), further enhancing its ability to access international markets.

In 2024, the coverage rate of quality certification for the Company's main products reached 100%.

Our product quality target
Finished product qualification rate maintained at

100%

The product quality certifications obtained by Meihua Group include:

ISO 9001 Quality Management System Certification

ISO 22000 Food Safety Management System Certification

BRC International Food Safety System Certification

The Feed Additive and Premixture System (FAMI-QS) of the EU

The MUI-HALAL Certification of Indonesia

Halal certifications of the U.S., Malaysia, and other countries

IP Non-GMO Certification

No major safety and quality incidents involving administrative penalties occurred in 2024.

Strategy

Based on the current industry and the operational status of the industrial chain, the Company assessed the risks, opportunities, and impacts it faces, clarifying the strategic guidance direction.

Risks/Oppor-tunities	Risks	
Type	Procurement risks	Operational risks
Description of Risks	The supply of major raw materials such as corn may experience quality fluctuations due to climate and market supply and demand changes, such as droughts or supplier production issues leading to a decline in raw material quality	Inadequate quality control during the production process, such as improper control of fermentation process parameters and failure to address equipment malfunctions in a timely manner, leading to product quality issues
Financial Impact	Cost increase, Revenue decrease	Cost increase, Revenue decrease
Impact Period	Medium to long-term	Medium to long-term
Degree of Impact	High	High
Likelihood of Occurrence	Medium	Medium
Value Chain Segment Affected	Upstream, operations	operations
Counter measures	Establish strict procurement and inspection processes, improve the quality monitoring system, formulate recall plans, and carry out quality culture construction	Improve quality management systems and standards, strengthen the monitoring production process; regularly maintain and update equipment; and enhance employees' quality awareness and operational skills

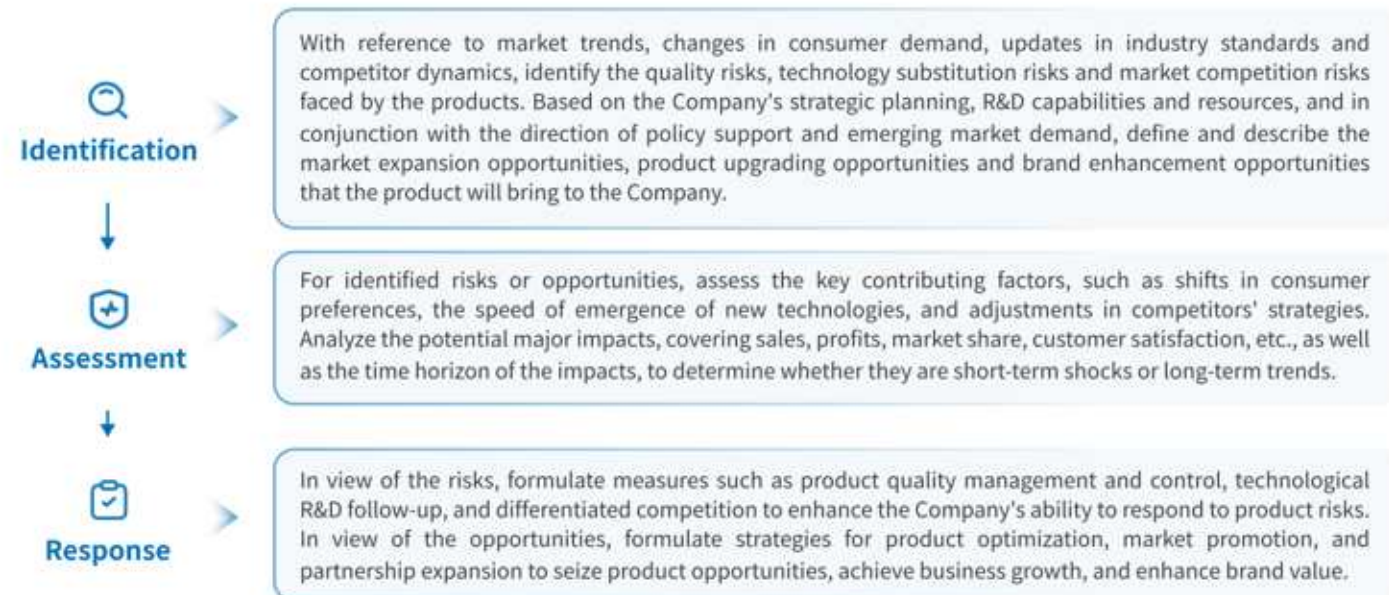
Note: we define short-term, medium-term and long-term impact cycles as 1-3 years, 3-5 years, and more than 5 years, respectively; large, medium and low impact levels as serious, moderate and slight impacts on the Company's production and operations, respectively; and high, medium and low likelihoods of occurrence as very likely to occur, more likely to occur, and less likely to occur, respectively.

Risks	Opportunities	
Policy risks	Market opportunities	Policy opportunities
The regulations and policies related to food, feed additives, and other industries are constantly being updated, such as the improvement of environmental standards and changes in additive usage norms, which result in products not meeting new requirements	Consumers are paying more attention to sustainable products, a sustainable raw material procurement system, such as purchasing organic raw materials, may be established to meet market demand	Demonstrate outstanding performance in regulatory compliance to obtain relevant certifications and qualifications, such as organic product certification and HACCP system certification, enhancing market trust
Cost increase, Revenue decrease	Revenue increase	Revenue increase
Medium to long-term	Medium to long-term	Medium to long-term
High	High	High
Medium	High	Medium
operations	Upstream, operations	operations
Establish a regulatory tracking mechanism to keep abreast of policy developments; strengthen internal compliance management and adjust products and production processes in advance; and actively participate in the development of industry standards	Collaborate with sustainable material suppliers to establish a certification system; and promote the concept of sustainable material products	Continuously strengthen compliance management and actively apply for high-value certifications; and utilize certification advantages for market promotion and advertising



Impacts, Risks, and Opportunities

Products are the core carriers for an enterprise to establish itself in the market, and Meihua Group deeply understands the importance of product management. To maintain a competitive advantage in a complex and changing market environment, the Company follows a management process of identifying, assessing and responding to all aspects of the risks and opportunities faced by its products and the resulting impact.



Product Quality and Safety Management and Control Measures

The Company continues to improve the whole-chain quality traceability management system, covering all aspects from raw material procurement, manufacturing, warehousing and logistics to sales, to ensure that product quality is stable and up to standard. The Company promotes the linkage between quality and production module systems, places the quality control at the forefront of the production process, advances intelligent, automated, and visual quality process control, ensuring the provision of safe and reliable products to customers.

Incoming Material Management and Control

The Company carries out supplier quality management and control work based on the Supplier Quality Management Manual, introduces qualified and stable suppliers through strict selection, on-site audits, and irregular unannounced inspections, firmly controlling the quality level of incoming materials. The Company has established a risk identification and assessment mechanism for raw and auxiliary materials, and conducts graded quality management and control of suppliers based on the risk level of materials. During the cooperation process, the Company actively guides suppliers in collaborative development, conducts on-site inspections and training for key suppliers, assists suppliers in formulating rectification plans, and encourages them to continuously improve their quality management level through product quality system certification, further solidifying the quality foundation of suppliers.

During the reporting period, the Company did not experience any quality incidents caused by supplier quality issues. A total of 4 on-site inspections and training sessions were conducted for suppliers, with a total training duration of 80 hours and a total of 50 participants.

43% of Meihua Group's suppliers have passed product quality related certifications including

HACCP

ISO 22000

FSSC22000

ISO 9001

Process Control

In terms of process quality control, the company has always adhered to the quality management philosophy of "prevention first", focusing on design, raw materials, personnel, equipment, and production processes. It has built a stringent and efficient control system, strictly implementing process indicator control and improving the production site according to the system requirements, thereby reducing the defect rate and customer complaints.

Meanwhile, the Company closely follows the trend of intelligent development in the industry and continuously introduces automation and intelligent technologies in the production process. By widely applying automated equipment and deeply integrating intelligent systems, the Company improves the controllability and stability of the production process, minimizes human interference and ensures the consistency and stability of product quality.

Enhance On-site Control To Eliminate the Foreign Objects in Products

The management and control of the foreign objects in food is a key point in ensuring product quality and consumer health. The Company attaches great importance to the management and control of major foreign object risk sources, identifies risks according to processes and clarifies the key monitoring points, inspection frequency, and operating procedures for each area. Since the implementation of GMP in the food workshop, through basic management of the production site and control of major foreign object risk sources, the Company has achieved significant results in foreign object management and control, with a year-on-year decline in foreign object issues. The Company has systematically upgraded and transformed packaging equipment, not only improving packaging efficiency but also reducing human intervention in the packaging process, significantly lowering the risk of introducing foreign object and ensuring the quality and safety of the product packaging stage.

Implement the MES Alarm System To Strengthen Process Quality Control

To accurately control the production process, we have established a comprehensive quality control table for the production process to deeply analyze each control point, and based on the risk level of control points, established a hierarchical responsibility model. By monitoring data trends through reports, we can promptly correct quality hazards, effectively preventing potential issues.

In order to adapt to the trend of intelligent development and empower process quality control with technological innovation, we have taken the lead in implementing MES quality online alarm system in the pilot factory of Jilin Base, and gradually promoted it to other factories, continuously pushing quality control towards automation and intelligence, continuously improving the overall process quality control level of the Company, and laying a solid foundation for the stability and improvement of product quality.



Product Testing

Product quality testing 2024

The coverage rate of product quality testing

100%

The pass rate of quality testing for incoming products

99.80%

Relying on the "Lighthouse Factory" construction project, the Company integrates quality management with the LIMS system to achieve real-time monitoring of quality parameters throughout the entire production process, placing quality control at the forefront of the production process, which significantly reduces the probability of unqualified products occurring during production, and further enhances the stability and safety of the products.

The Company regularly conducts quality testing of raw materials and products, and has formulated the Quality Standard of Materials and Excipient Materials, the Quality Standard of Product, and the Inspection Guide of Products for different types of products, and carries out comprehensive incoming and outgoing management and control to ensure that the products meet the quality standards.

Taking Jilin Base as a pilot, we upgrade the laboratory testing business, personnel management, equipment management, consumable management, and environmental management to an information-based system according to the CNAS Management System for Testing and Calibration Laboratories, which eliminates offline paper documents, prevents human interference, and ensures the authenticity, accuracy, and efficiency of testing results through automatic data collection, automatic calculation of testing processes, automatic uploading of results, and early warning analysis, while optimizing efficiency and improving management levels.

In addition, the Company formulates external inspection plans for all finished products at the beginning of each year, regularly sends products to internationally authoritative third-party organizations for comprehensive testing to assess food and feed safety risks, while benchmarking the accuracy of internal testing.

Unqualified Products Management and Control

The Company has established the Unqualified Products Control System, which clearly defines the management responsibilities and standards to strictly regulate the handling process of unqualified products, including identification, cause analysis, and emergency handling, so as to ensure that product quality risks are effectively prevented and controlled.

The finished product qualification rate of Meihua Group 2024 **100%**

Product Recall

The Company has established a comprehensive Product Recall Procedure to build efficient product recall mechanisms, ensuring a rapid response and proper handling of product quality risks.

Once a quality defect or safety hazard is identified, the Company will immediately initiate the recall procedure to ensure the identification and comprehensive tracing of affected products. For recalled products, the Company has set up a dedicated investigation team to analyze the root cause of the problem, track the progress of the incident handling, and develop corrective and preventive measures to avoid similar incidents in the future. In addition, each production base regularly conducts product recall drills annually for the purpose of verifying the ability of relevant departments to track risk products within the specified time and assessing the reasonableness and effectiveness of the recall procedure by simulating recall scenarios.

In 2024, the Company conducted a total of 13 recall simulation drills across all bases, covering MSG, Xanthan Gum, lysine hydrochloride, lysine sulfate, protein powder, and MSG residue, further strengthening employees' awareness of recalls and emergency response capabilities.

In 2024, the Company proactively recalled a total of 354 tons of products, involving trehalose and valine. The reason for the recall was a packaging sealing issue, which could lead to product leakage and moisture absorption. Through proactive recalls, the Company has reduced potential market impact, achieving a problem resolution rate of 100%.

Product recall 2024

13

simulation drills

354

tons of products recalled

100%

problem resolution rate

Development of Quality Culture

In 2024, the Company conducted product quality training for employees

Accumulating
47,295
hours of training

Involving
2,373
employees

The Company vigorously promotes the development of quality culture that involves all employees, enhancing their skill levels through diverse quality training activities.

"Quality Month" event

In 2024, the Group launched a "Quality Month" event with the theme of "creating quality with craftsmanship, respecting principles and keeping standards," with the guiding principle of "taking process as the core and equipment as the basis to ensure the best quality of products," aiming at returning to principles, strengthening quality awareness, and enhancing employees' participation in quality. Through the analysis and evaluation of quality incidents and testing incidents over the years, and quality quiz competitions, internalize the sense of responsibility for product quality issues to promote the construction of employee quality awareness from top to bottom, ensuring stable improvement in product quality.

Quality Analysis PK

Carry out quality analysis PK activities in all branches, where problems will be deeply analyzed for the purpose of training and consolidation.

Quality Knowledge Q&A

Through the exceptionally popular quality knowledge quiz, employees will reap both quality knowledge and material rewards. The number of participants in the activity reached **18495**, with achieving full marks **914**.

Participation in Formulation of Public Policies

While strengthening its own quality control, the Company actively participates in industry exchanges and cooperation. Meihua Group is currently the member of the Industrial Fermentation Sub-Technical Committee of the Technical Committee 64 on Food Industry of Standardization Administration of China, the China Biotech Fermentation Industry Association, and other industry organizations, and is deeply involved in the construction of industry standard systems. In 2024, the Company participated twice in the formulation and revision of national standards and group standards.

Published by	Name of Standard	Status
Ministry of Industry and Information Technology of the People's Republic of China	Amino Acids, Amino Acid Salts and Analogues Part 9: L-proline	Published
National Health Commission, State Administration for Market Regulation	National Food Safety Standards—General Hygiene Regulations for the Production of Food Additives	Published



Chemical Safety Management

Strengthening the safety management of hazardous chemicals is not only an important guarantee for the stable and sustainable development of enterprises, but also a necessary measure to protect the life and health of employees and to maintain the ecological environment. The Company strictly adheres to national laws and regulations, continuously optimizes the management system for the entire lifecycle of hazardous chemicals, so as to ensure that all work meets the latest safety standards, and constantly improve the capability for chemical safety management and control.

Hazardous Chemical Management System

The Company continuously improves the Regulations on the Safety Management of Hazardous Chemicals, and has established a comprehensive management mechanism for the entire lifecycle of chemicals, including comprehensive control over the procurement, storage, application, and disposal of chemicals involved in the production process, so as to ensure 100% coverage of the identification, assessment, and government reporting of all hazardous chemicals. From the source of hazardous chemicals entering the Company to the end of proper disposal, the Company implements strict control over the whole process, and makes every effort to ensure the safety of production, personnel and the environment.

Identification, Classification, and Assessment of Hazardous Chemicals

In 2024, the Company continued to promote the general survey of hazardous chemicals, systematically identifying and classifying physical dangers, health risks, environmental risks, inhibiting poisoned, inhibiting explosion, highly toxic drugs, etc. According to the General Rules for the Hazardous Chemicals Warehouse Storage (GB15603-2022), and considering our actual situation, the Company further optimized the Taboo Matrix of Hazardous Chemicals to ensure the more scientific and standardized management of chemicals. Meanwhile, the Company completed the re-certification work in accordance with the Regulations on the Safety Management of Hazardous Chemicals, and strengthened on-site management, prepared and improved safety labels of hazardous chemicals, and applied QR code traceability functions to enhance information transparency and traceability.

新疆基地-常用危险化学品禁忌矩阵表																			
序号	化学品名称	硫酸	盐酸	氨	氯(液化)	三氯甲烷	二氯甲烷	氯(液化)	氯	乙醇(无水)	三氯乙烷	液碱	液酸	氢氧化钠溶液	甲醇	醋酸(腐蚀性)	丙酮(易燃液体)	甲苯(易燃液体)	五氧化二磷
1	硫酸	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
2	盐酸	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
3	氨	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
4	液氯	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
5	三氯甲烷	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
6	二氯甲烷	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
7	氯(液化)	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
8	氯	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
9	乙醇(无水)	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
10	三氯乙烷	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
11	液碱	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
12	液酸	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
13	氢氧化钠溶液	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
14	甲醇	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
15	醋酸(腐蚀性)	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
16	丙酮(易燃液体)	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
17	甲苯(易燃液体)	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
18	五氧化二磷	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×

Disclosure of Chemicals

The Company strictly follows the requirements for chemical safety management to establish and maintain a complete safety ledger for chemicals, and files with government departments in accordance with the safety ledger to ensure that government reporting and review work complies with the relevant provisions of the Regulations on the Safety Management of Hazardous Chemicals, achieving 100% coverage of information disclosure and ensuring compliance and transparency.

Indicator	Unit	2024
Proportion of chemicals identified/classified by the Company to all chemicals listed in the Hazardous Chemicals Information List (2024)	Percentage	2.2%
Disclosure scope of chemicals	Percentage	100%
Assessment scope of chemical hazards	Percentage	100%



Substitution and Elimination of Chemicals

The Company will continue to carry out actions for the substitution of high-risk chemicals and the elimination of chemicals, incorporating environmental and health standards into the product design process to promote sustainable development for both the enterprise and the environment.



Customer Rights and Interests protection

The Company always puts customers first, adhering to the service philosophy of "Three Stabilities." The Company continuously improves the customer service system by controlling "stable quality, stable supply, and relatively stable price" to provide customers with high-quality, efficient, and professional services, build a win-win customer cooperation model, enhance customer satisfaction, loyalty, and cooperation stability, and establish long-term, stable, and valuable customer relationships.

Customer Communication and Service

The Company has formulated the Sales Office Work Standard Manual to refine customer service processes and standards, clarify the different types of customer demands, and ensure that contract management, plan implementation, financial management, and after-sales service are efficient and standardized throughout the entire process.

To ensure high-quality service to customers, the Company organizes special training for customer service positions every month. The training content includes job responsibilities, product knowledge, and communication skills, helping customer service personnel quickly and accurately answer customers' inquiries about product usage and storage methods. Meanwhile, the Company emphasizes the cultivation of employees' service awareness. Through real case analysis, employees gain a deep understanding of customer needs, enhancing the relevance and responsiveness of services.

In addition, the Company values the professional quality of customer service and sales personnel, formulates and implements the Anti-Bribery Agreement, and by providing training for all employees and signing agreements, ensures strict adherence to the Company's Sales Standardization Manual to provide customers with open and fair services.

Customer Complaint Management

To ensure that customer complaints are handled properly and efficiently, Meihua Group has formulated the Customer Complaint Handling Process and set up a scientific tiered handling mechanism. Depending on the nature and severity of the complaint, the Company will initiate corresponding level of handling process to investigate, verify, and resolve customer requests as quickly as possible, significantly improving service efficiency and ensuring the timeliness of customer service, while comprehensively safeguarding the quality of customer service.



The Company conducts regular customer satisfaction surveys every year, and by continuously collecting, sorting out, and analyzing customer complaints and service requests, and conducting reviews and summaries, continuously optimizes service processes to reduce the occurrence of complaints from the root cause, thereby continuously improving customer satisfaction.

89 customer complaints (including sales and division complaint data) was handled in 2024.

Customer satisfaction rate 2024	
Questionnaires amount	Rate
1,337	93.85

Improvement of Logistics Planning Management Capability

Through the effective implementation of the Logistics Standardization Manual, the Company has improved customer satisfaction with delivery requirements. According to customer contracts and actual demands of customers, the Company clarifies the shipping plan, flow, and customer demands at the time of signing the contract, reasonably arranges the shipping plan, and utilizes the TMS system to push shipping notifications and estimated arrival times, ensuring that customers can track order progress in real-time and make arrangement for receiving accordingly.

Data Security and Customer Privacy Protection

Meihua Group deeply implements the Cybersecurity Law of the People's Republic of China and the Personal Information Protection Law of the People's Republic of China and continuously promotes data security and privacy protection. On one hand, the Company continuously strengthens the security maintenance of external network access and implements strict management and control over external network access; on the other hand, the Company establishes internally a continuous, dynamic, and fine-grained access control strategy based on users, accurately allocating access permissions according to employees' job functions and business needs, so as to ensure that core data responsibilities are assigned to individuals, and eliminate internal and external information security risks to provide strong protection for the Company's confidential data and the privacy of employees, customers, and other stakeholders.

No information security and privacy leakage incidents occurred in 2024.

Data Security and Customer Privacy Protection Measures



System construction

The Company formulates and strictly implements the Regulations on the Management of the Use of Office Computer and takes multiple security measures to ensure the confidentiality, integrity, and availability of internal and customer data.



Intranet isolation and access control

Establish an independent intranet system to ensure the connection and access by authorized internal personnel, effectively limiting unauthorized external access and reducing potential security risks of customer data being obtained externally.



Office computer security management

Set strict access permissions for office computers, and employees can obtain specific permissions in certain areas through a formal application process, ensuring that the flow of information complies with the Company's data security policies.



Prohibiting the use of external storage devices

To prevent data leakage and virus intrusion, the use of external USB drives or other external storage devices on office computers is prohibited, and it is required to cut off the transmission path of data on unauthorized devices to avoid the outflow of customer privacy data through external storage devices;



Information security training

Include information security in the onboarding training for new employees, enhancing their awareness of information security through on-site lectures, case studies, and other methods.



Innovation-driven Development And Technology Ethics

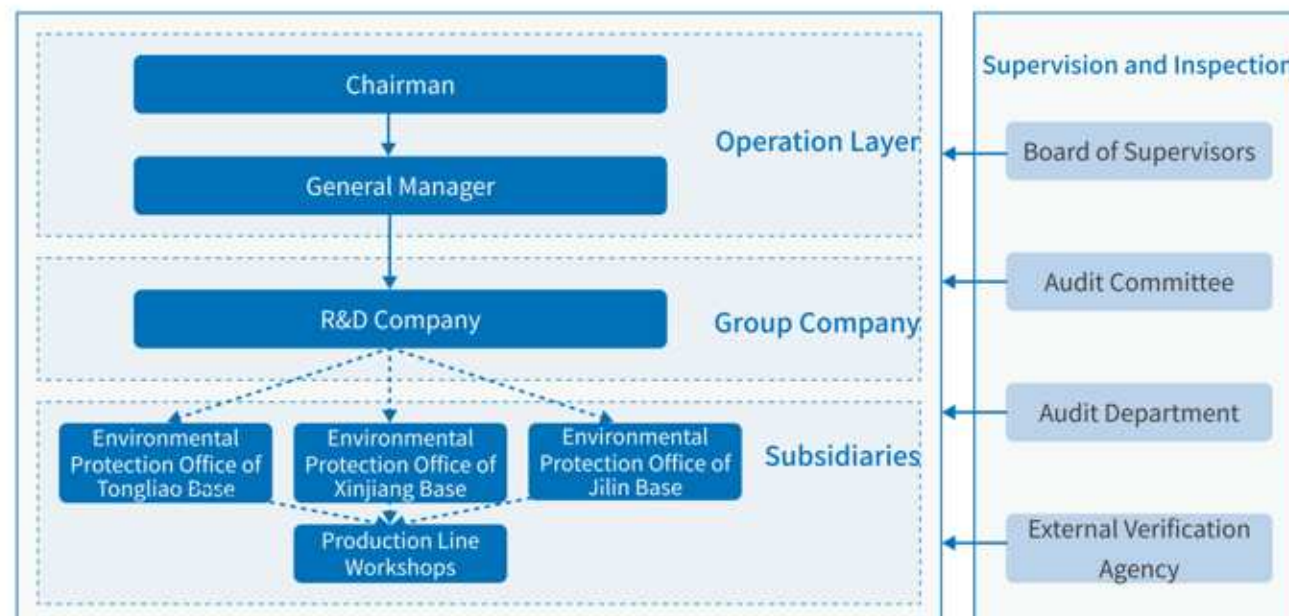
Meihua Group is committed to becoming a leading enterprise in synthetic biology, adhering to innovation-driven development, empowering a sustainable future through R&D, and creating greater value for customers, the industry, and society. The Company continues to increase its investment in R&D, deepen the study of core technologies such as biological fermentation and synthetic biology to create greener, higher-end, and more precise manufacturing and produce high-quality products that meet social needs and are environmentally friendly, and continues to enhance product competitiveness and innovation and lead high-quality development of enterprises and even the industry through technological innovation, contributing to human health and well-being.

Governance

R&D Governance Structure

Meihua Group actively promotes innovative development and continuously improves the management system for R&D and innovation to fully stimulate the innovative vitality of all employees. In 2024, to standardize the full-process management of R&D projects from strategic initiation to technical production implementation, clarify the responsibilities of all relevant personnel, improve project success rates, and ensure that R&D work is carried out efficiently and orderly, the Company revised the Full-Process Management Regulations for R&D Projects to promote collaboration among departments in identifying opportunities, rigorously validate the implementation process, and effectively control risks to ensure the smooth advancement of R&D projects, providing a solid guarantee for the Company's continuous progress in technological innovation.

The Company views innovation as a core driving force, continuously optimizes the governance structure for R&D innovation, and has established a management model with the Chairman as the highest leader and with the collaborative operation at all levels.



R&D Team Building

The Company has always regarded R&D and innovation as the core driving force for enterprise development and deeply recognized the key role of high-end talent in innovation and R&D. The Company has actively made a series of talent introduction and team building efforts to further expand the R&D team led by PhDs. By improving the talent attraction and training mechanism, the Company continuously enhances the overall strength of the R&D team to consolidate its position in the industry.

By establishing close cooperative relationships with several well-known universities and research institutions, the Company accurately connects with high-end talent resources, attracting outstanding PhDs with generous treatment and broad development space. Meanwhile, the Company is actively selecting and training potential researchers to inject fresh blood into the team.

As of the end of 2024, the Company's innovation and R&D team has grown to over **20** members, covering multidisciplinary fields such as bioengineering, microbiology, chemical engineering, bioinformatics, and enzyme engineering. They possess rich theoretical knowledge and practical experience, and will leverage their expertise and innovative thinking to continuously drive the Company in product development and technological innovation, helping the Company maintain a leading position in fierce market competition.

As of the end of the reporting period, the Company has formed a strong R&D team with **402** members, accounting for **3.13%** of the total number of employees.

Indicator	Quantity	Proportion
Total number of R&D personnel	402	100%
PhD	13	3.23%
Master	93	23.13%
Bachelor	139	34.58%
Junior college	157	39.05%



Strategy

Based on the R&D layout across the entire industrial chain, Meihua Group has formulated a long-term technological innovation strategy. In the future, the Company will further connect the upstream and downstream industrial chains, strengthen cooperation with raw material suppliers and product sales channels, and achieve coordinated development of the industrial chain. Meanwhile, the Company closely monitors industry trends and market demands and adjusts R&D directions in a timely manner to provide strong technical support for the Company's sustainable development.

Risks/Opportunities	Risks	
Type	Technical risks	Technical risks
Description of Risks/Opportunities	Due to the emergence of new technologies in the industry, if the Company's process technology is not updated in a timely manner, it may lead to low production efficiency, high energy consumption, and uncompetitive product quality and costs	In the process of R&D in synthetic biology and other technologies, due to technical difficulties that cannot be overcome, deviation in R&D direction, etc., the R&D projects fail to achieve expected goals, such as the failure of new amino acid product development.
Financial Impact	Cost increase, revenue decrease	Cost increase
Impact Period	Medium to long-term	Medium to long-term
Degree of Impact	High	High
Likelihood of Occurrence	Medium	Medium
Value Chain Segment Affected	Operations	Operations
Counter measures	Continuously monitor industry technology trends, strengthen technology monitoring and early warning; increase R&D investment, accelerate the pace of technological innovation; and strengthen intellectual property protection to build technological barriers	Increase investment in R&D to attract top talents; strengthen cooperation with research institutions to share resources and technology; establish a scientific evaluation mechanism for R&D projects to timely adjust research directions

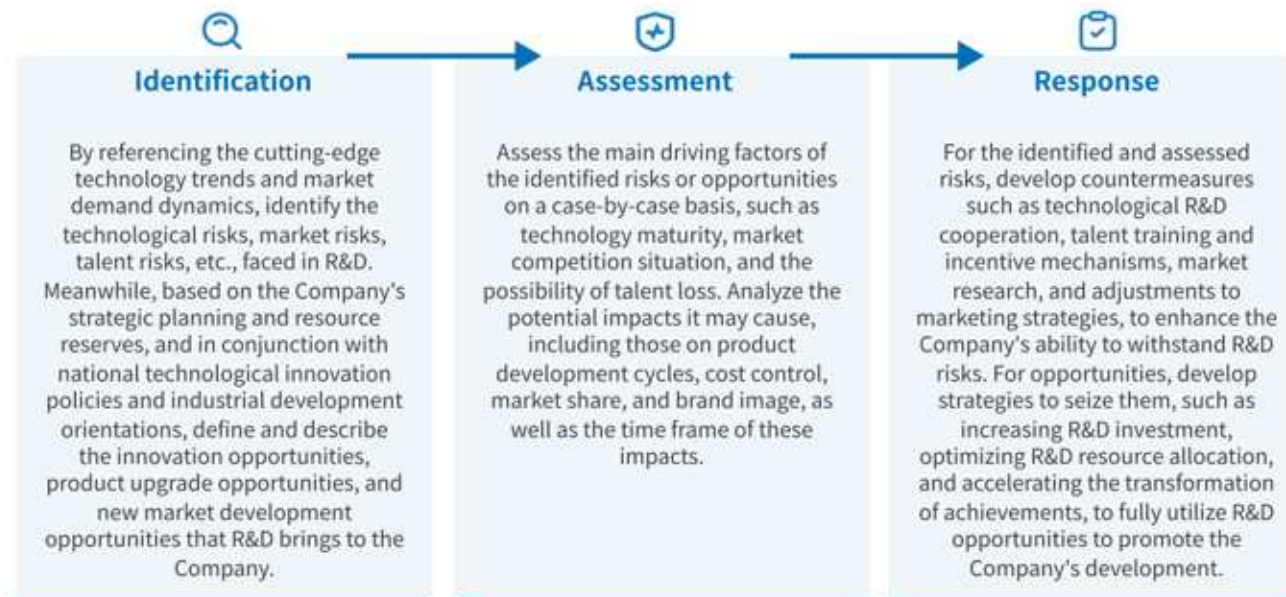
Note: we define short-term, medium-term and long-term impact cycles as 1-3 years, 3-5 years, and more than 5 years, respectively; large, medium and low impact levels as serious, moderate and slight impacts on the Company's production and operations, respectively; and high, medium and low likelihoods of occurrence as very likely to occur, more likely to occur, and less likely to occur, respectively.

Risks	Opportunities	
Technical risks	Technical opportunities	Technical opportunities
During the process of transforming R&D achievements into actual products or productivity, there may be challenges such as the difficulties in realizing the production processes and the low market acceptance, which can hinder effective commercialization of R&D achievements	Breakthroughs in synthetic biology technology may bring new R&D directions and product innovation opportunities for Meihua Group, such as developing more efficient strains to improve product quality and yield	Strengthen the cooperation among enterprises, universities, and research institutions in the bio-fermentation industry to share technology, talents, and resources, promoting overall technological progress in the industry, bringing more innovative ideas and cooperation opportunities to Meihua Group
Cost increase, revenue decrease	Cost decrease, revenue increase	Cost decrease
Medium to long-term	Long-term	Long-term
High	High	High
Medium	High	Medium
Operations	Operations	Operations
Strengthen cooperation between R&D and production departments and consider the production feasibility in advance; conduct in-depth market research to accurately grasp market demand; and optimize the process of transforming R&D achievements to improve transformation efficiency	Increase R&D investment and focus on cutting-edge technology research; strengthen talent training and introduction, and build a high-quality R&D team; and actively carry out industry-university-research cooperation to accelerate technological innovation and achievement transformation	Actively participate in industry association activities to strengthen communication and cooperation with peer enterprises; carry out industry-university-research cooperation projects to share resources and technology; and establish an industry innovation alliance to jointly tackle technical challenges



Management of Impacts, Risks, and Opportunities

To effectively manage the uncertainties in the R&D process, the Company systematically manages the impacts, risks, and opportunities related to R&D through three key steps: identification, assessment, and response.



Indicators and Targets

The Company continues to increase R&D investment, and focuses on innovation in synthetic biology technology to continuously enhancing its technological strength in this field. In the future, the Company will continue to explore globally leading synthetic biology solutions to promote technological breakthroughs and industrial applications.

In 2024, the Company's R&D investment reached RMB 733 million, accounting for 2.93% of its income from primary business.



Achievements in Technological Innovation

As a global leader in amino acid production, Meihua Group's technological innovation achievements provide references and demonstrations for the development of the entire amino acid industry, which strongly promotes technological progress and industrial upgrading across the industry, and makes the Company become an important engine driving the vigorous development of the amino acid industry. The new strain of glutamic acid independently developed by the Company has shown remarkable results in practical production applications, reducing the production cost per ton by nearly RMB 100, significantly improving the production efficiency and product quality.



In 2024, the Company added 39 new patent authorizations, with the newly acquired invention patents involving the Company's core products such as glutamic acid, lysine, and threonine, forming a full lifecycle intellectual property "moat" from product design, R&D, large-scale production to market promotion. As of December 31, 2024, the Company had a total of 160 valid patents (including 109 invention patents, 49 utility model patents, and 2 design patents). The Company has achieved full coverage in the technical fields of strain design and modification, fermentation process control, and downstream processing.



By continuously optimizing fermentation and extraction processes, combined with its strong strain construction capabilities, the Company can complete the performance iteration of a generation of strains within 6-9 months, significantly improving the production efficiency and quality of products, and thus further consolidating the Company's technological leadership in the industry.

Through continuous scientific research accumulation, the Company has made breakthrough progress in the independently developed strains of glutamic acid, glutamine, inosine, guanosine, etc., and has achieved process verification and trial production of multiple new products. In addition, the Company continues to make new achievements in the production and application of amino acids and polysaccharides, with production technologies of each product at an internationally leading level. The Company focuses on key links in the transformation of achievements, working faster to promote the industrial application of scientific research achievements to enhance their industrial value. In 2024, the Company successfully achieved the iterative update of production strains for glutamic acid and glutamine, with an additional annual economic benefit of nearly RMB 100 million.



The Company is acquiring businesses and assets to add various amino acid categories and strains, such as arginine, histidine, citrulline, ornithine, and hydroxyproline, and to obtain fermentation strains and related patents for multiple amino acids. This will not only enrich the Company's product variety but also provide more technical support for the Company's future development.



| R&D and Innovation Cooperation

• Industry-University-Research Cooperation

Meihua Group has always adhered to an open and innovative development philosophy, unwaveringly deepening its cooperation with top research institutions and universities at home and abroad. By building a deeply integrated cooperation platform, the Company actively introduces cutting-edge international technologies and advanced concepts, working together to carry out pioneering research projects.

Currently, the Company has established long-term and stable cooperative relationships with top universities and research institutions in the industry, such as the Chinese Academy of Sciences Center of Excellence in Molecular Plant Science, the Institute of Microbiology of the Chinese Academy of Sciences, and Jiangnan University. All parties are conducting joint technological research on key scientific issues in the field of intelligent biomanufacturing, striving to promote relevant technological breakthroughs and industrialization. During the cooperation process, the Company actively engages in talent exchange activities with universities and research institutions, jointly implementing R&D cooperation projects, fully integrating and utilizing external high-quality research resources and high-end talent advantages, which has significantly accelerated the Company's technological innovation pace and greatly enhanced its research strength and industry influence in the field of synthetic biology.

• Business Cooperation with Enterprises

In the field of product cooperation, Meihua Group has established a stable partnership with the globally renowned company Ajinomoto for threonine and lysine products. Both parties, based on the principle of complementary advantages, carry out technical exchanges and discussions and market promotion on related products, and works together to calmly cope with the intense market competition, jointly promoting the steady development of the industry.

• Construction of R&D and Innovation Platform

Meihua Group actively builds an automated and intelligent synthetic biology R&D platform to provide better hardware and software support for technological innovation.

The Company continuously optimizes and upgrades its existing high-level support platforms and enhance the accuracy and efficiency of the metabolic pathway design platform to enable the strain construction platform to rapidly develop high-performance strains; the enzyme engineering modification technology platform will achieve deeper modifications of enzymes, improving their activity and stability; in terms of product application development platforms, the Company actively expands into new application areas to launch more innovative and competitive products; the precision fermentation technology platform will make significant breakthroughs in fermentation processes, increasing fermentation yields and product quality.

| Intellectual Property System

As a company centered on technological innovation, Meihua Group places great importance on intellectual property protection, viewing it as a core component of its corporate strategy.

The Company implements comprehensive Intellectual Property Management and Protection Regulations to establish standardized patent review and application processes, with dedicated intellectual property assessment and protection measures at all key stages from project establishment to achievements transformation, and by applying for patents in a timely manner for new technological innovations and R&D achievements, to ensure effective protection of core technologies. Meanwhile, the Company established a dedicated intellectual property management department which is staffed by professional managers and responsible for patent applications, maintenance, and rights protection.

To enhance the awareness of intellectual property protection among all employees, the Company regularly provides patent knowledge training and carries out internal publicity to regulate employees' R&D behavior and prevent infringement risks. At all stages of R&D activities, the Company actively carries out intellectual property searches and infringement risk analyses, respects others' intellectual property rights, and promptly identifies and corrects potential infringement issues.

In the face of external competition, Meihua Group resolutely safeguards its own intellectual property rights. In 2024, the Company won the first-instance lawsuit for the "Sanxan Gum" patent (Patent No.: 201911374275.0), which not only protected the legitimate rights and interests of the enterprise but also set a positive example for the industry, promoting the entire industry to pay attention to intellectual property protection.

Meihua Group will continue to increase investment in R&D, cultivate professional talent, continuously strengthen technological innovation, and launch multiple new products and technologies with independent intellectual property rights, enhancing core competitiveness and providing strong support for the sustainable development of the enterprise.

| Technology Ethics

Meihua Group attaches great importance to technology ethics issues, ensures compliance with relevant laws and regulations and social ethical standards during the process of technological innovation, and actively assumes social responsibility for technological innovation. On this basis, Meihua Group will continue to strengthen technology ethics related training and publicity, raise the awareness of technology ethics among all employees, ensure that R&D activities are legal, fair, and sustainable, and actively prevent and respond to negative events.

In 2024, no negative events related to technology ethics occurred at Meihua Group.



03

Environmental Protection

Meihua Group always adheres to the concept of green and low-carbon development, strictly follows laws and regulations in addressing climate change, water resource utilization, pollutant discharge, waste management, and biodiversity protection. By establishing standardized management processes and empowering them with information technology, the Company continuously strengthens the normalized management of environmental protection, improves the level of environmental governance, continuously enhances resource utilization efficiency, reduces environmental impact, actively takes measures to address climate change, helping build a sustainable ecological system.

- ◆ Addressing climate change 49
- ◆ Environmental compliance management 57
- ◆ Green packaging materials 66
- ◆ Biodiversity conservation 66

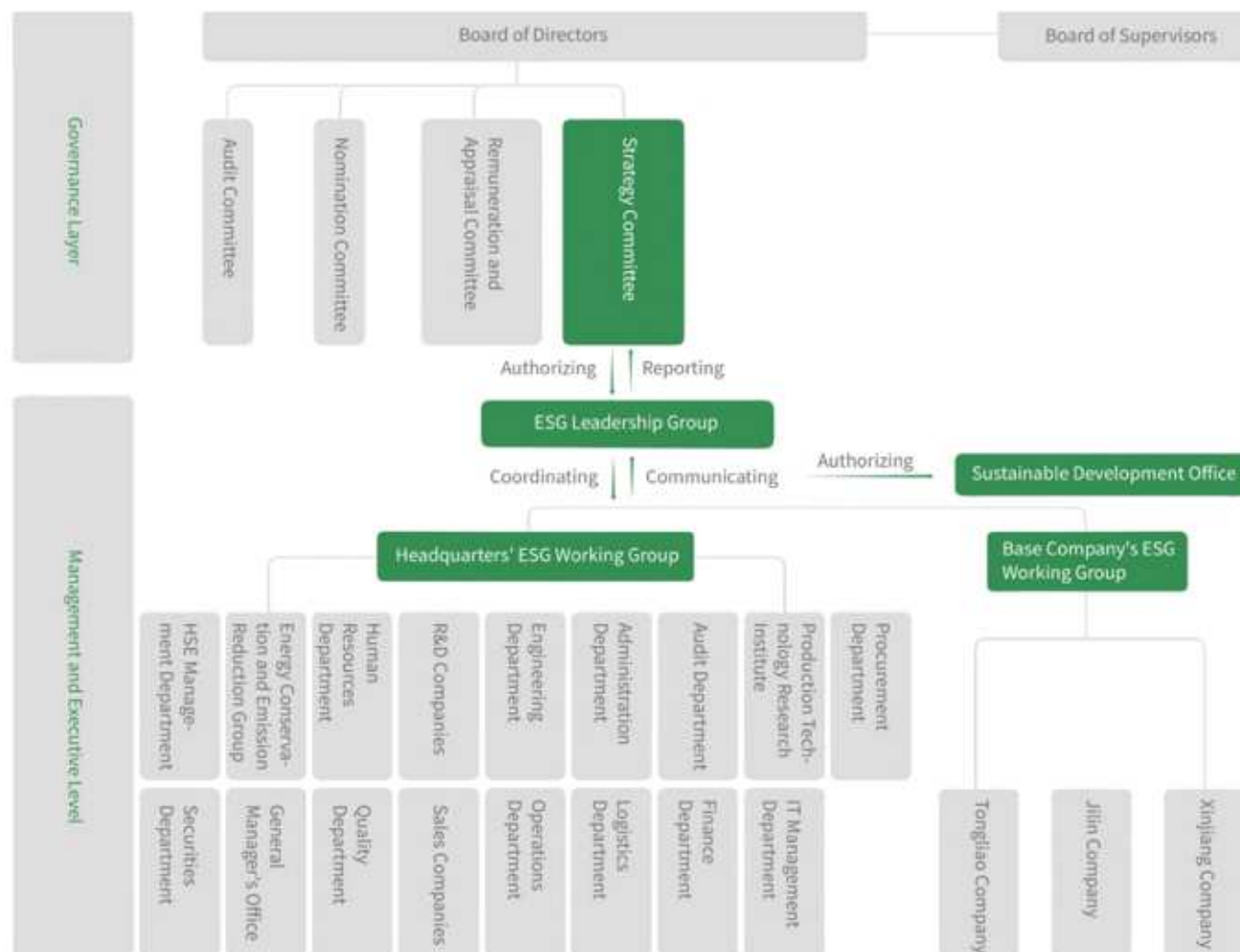


Addressing Climate Change

Governance

The Company attaches great importance to climate change related risk management, and carried out climate change risk and opportunity analysis based on macro policies, the Company's strategic planning, production and operations on a regular basis. It has formulated the Management Measures for Addressing Climate Change and Sustainable Development, and other systems, clarified the responsibilities of all levels in addressing climate change, and proactively integrated climate change into the Company's development strategy, major decisions and production and operation.

The Strategy Committee is responsible for the Company's climate change responses and holds regular meetings on relevant matters. The Sustainable Development Office under the Strategy Committee communicates with the Board of Directors on climate change in a timely manner.



Strategy

The Company actively conducts climate risk analysis and responses, identifies physical and transition climate risks based on its own situation, assesses the time frame of their occurrence and their impact on the Company, and takes targeted measures in response to the characteristics of various climate risks.

Physical Risks

Acute risks >>>>

Short-term, sudden extreme weather events, such as typhoons, floods, snowstorms, and high temperatures, which may cause damage to Company's infrastructure, production interruptions, transportation disruptions, and other property losses, while threatening the health and safety of employees.

Countermeasures >>>>

1. Develop emergency response plans for flood and high-temperature situations. 2. Closely monitor information released by meteorological departments and pay attention to weather warning information. 3. Increase the installation of extreme weather defense equipment and facilities.

Chronic risks >>>>

The company's main raw material, corn, has strict requirements for its growing environment. An increase in average temperature may lead to water shortages and alter the growth cycle and suitable planting areas for corn, affecting the Company's normal production operations.

Countermeasures >>>>

1. Pay attention to geographical and climatic information and adjust production strategies in a timely manner. 2. Gradually conduct water risk analysis and assessment, and in the future, incorporate water risk management into the Company's overall risk management.

Transition Risks

Policy and legal risks >>>>

Regulatory requirements are becoming increasingly stringent, and national and local governments are successively introducing relevant policies, leading to an increase in compliance risks for the Company during its low-carbon transition.

Countermeasures >>>>

1. Closely monitor the domestic and international climate change policy dynamics and timely adjust the Company's strategy and business model. 2. Actively promote the use of renewable energy and expand the utilization of solar and wind energy. 3. Implement technological upgrades and energy recovery projects to reduce energy waste at all stages and utilize energy more effectively and rationally.

Technical risks >>>>

Investment risks caused by the failure of R&D of low-carbon new technologies.

Countermeasures >>>>

1. Focus on the latest developments and applications of energy-saving technologies in the bio-fermentation industry, and conduct feasibility analysis for technology replacement while weighing technology maturity, investment costs, and expected returns, and introduce advanced energy-saving equipment.

Market risks >>>>

Customer preferences favor low-carbon products. Climate change leads to higher raw material and energy costs, which in turn leads to higher product prices.

Countermeasures >>>>

1. Timely adjust business models and strategies through the R&D of environmentally friendly and low-carbon products. 2. Jointly promote low-carbon transition in the supply chain through supply chain coordination transition, ensuring the stability and sustainability of raw material supply.

Reputation risks >>>>

Stakeholders' concerns about climate change continue to rise; failure to actively respond to climate change may affect the overall evaluation of the Company in the market, leading to reputational damage.

Countermeasures >>>>

1. Regularly publish ESG reports to disclose the Company's efforts and achievements in addressing climate change. 2. Actively participate in climate action initiatives and green projects to enhance social image and reputation.

Strategy

Opportunities

New product opportunities >>>>

Climate change has led to the popularity of low-carbon products and increased demand for new products.

Countermeasures >>>>

1. Continuously pay attention to the dynamics of market demand, launch new product development plans, and develop low-carbon products.

Resource efficiency >>>>

Use efficient equipment or intelligent energy management systems.

Countermeasures >>>>

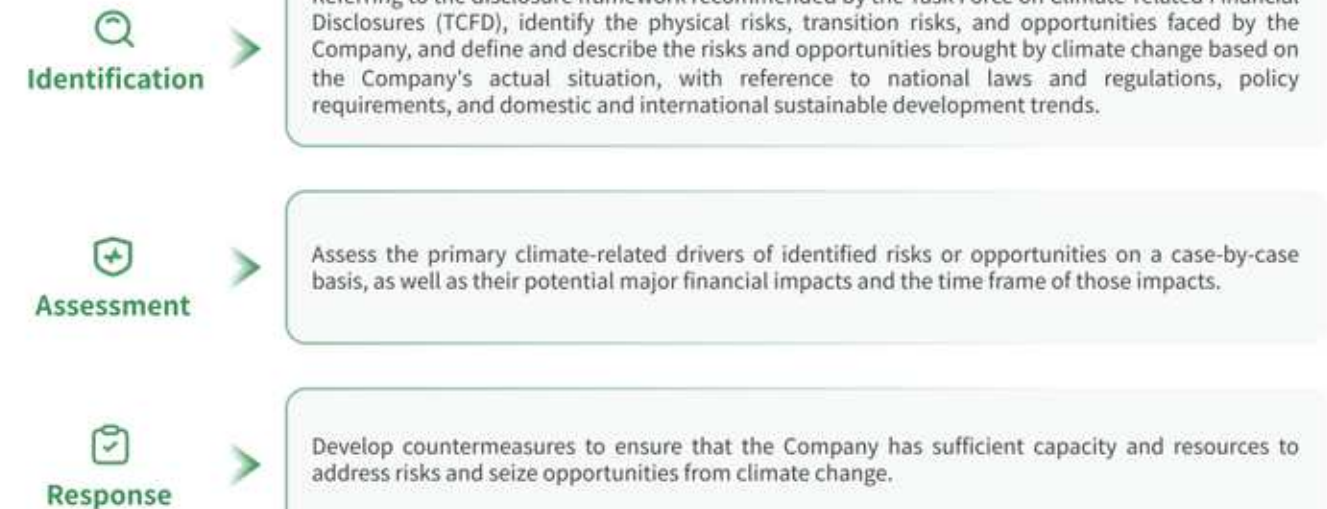
1. Build an integrated energy management system to monitor energy in real time, thus improving the efficiency of resource use.

Risks/Opportunities	Type	Financial Impact	Impact Period	Degree of Impact	Likelihood of Occurrence	Value Chain Segment Affected
Physical risks	Acute risks	Cost increase, revenue decrease	Short-term	High	Medium	Upstream, operations, downstream
	Chronic risks	Revenue decrease	Medium to long-term	Medium	Low	Upstream, operations, downstream
Transition risks	Policy and legal risks	Cost increases	Medium-term	Medium	Medium	Operations
	Technical risks	Increase in operating costs	Medium-term	High	Low	Operations
	Market risks	Cost increase, revenue decrease	Medium-term	Medium	Low	Operations
	Reputation risks	Revenue decrease	Short to medium-term	Low	Low	Operations
Opportunities	New product opportunities	Revenue increase	Long-term	High	Medium	Upstream, operations, downstream
	Resource efficiency	Cost decrease	Long-term	High	High	Operations

Note: we define short-term, medium-term and long-term impact cycles as 1-3 years, 3-5 years; and more than 5 years, respectively; large, medium and low impact levels as serious, moderate and slight impacts on the Company's production and operations, respectively; and high, medium and low likelihoods of occurrence as very likely to occur, more likely to occur, and less likely to occur, respectively.

Management of Impacts, Risks, and Opportunities

The Company manages the risks, opportunities, and corresponding impacts brought by climate change from three aspects: identification, response, and assessment.



Indicators And Targets

In the context of nation efforts promote carbon neutrality in 2020, Meihua Group actively responded to the National call and took the initiative to do various work to address climate change risks. According to the carbon neutrality vision target of the 14th Five-Year Plan, which aims for a reduction of 18% in carbon dioxide emissions per unit of GDP by 2025 compared to 2020, the Company has developed the strategy aimed at addressing climate change and reducing greenhouse gas emissions between 2020 and 2025, and clarified the specific objectives, work tasks, assessment and incentive methods of the whole Company to ensure the effective implementation of specific work. Meihua Group has set the greenhouse gas reduction targets: using 2020 as the base year, aiming for a 20% reduction in carbon dioxide emissions per RMB 10,000 of output value by 2025. As of the end of the reporting period, the interim target of a 16% reduction by 2024 has been achieved.

During the reporting period, the Company's greenhouse gas emissions were as follows:

Indicator	Unit	2024
Total GHG emissions	tCO ₂ e	9,030,482.02
Scope 1	tCO ₂ e	8,692,810.04
Scope 2	tCO ₂ e	337,671.98
Emission intensity	tCO ₂ e/RMB 100 million	360.22

Indicators and Targets

The energy consumption indicators for the Company in 2024 were as follows:

Key Performance	Unit	2024
Total energy consumption	tce	3,677,671.00
Direct energy	tce	3,540,405.97
Coal	tce	3,533,179
Gasoline	L	69,849
Diesel	Ton	315
Natural gas	cubic meter	7,662,165
Indirect energy	tce	137,265.03
Electricity	MWh	1,116,883.92
Clean energy usage	KWh	304,874,044.71
Energy use intensity (calculated per RMB 1 million of operating income)	GJ/RMB 1 million	4,293.92



Energy-saving and Carbon Reduction Measures

Meihua Group actively implemented the climate adaption strategies and carried out actions to address climate change risks. The Company strived to reduce greenhouse gas emissions and continuously improved its ability to cope with climate change risks from both the supply and usage sides through management optimization, equipment upgrading, technological transformation and process optimization, and clean energy substitution. Under the guidance of the national carbon peak and carbon neutrality, Meihua Group insists on equal emphasis on both technology and management, and continues to reduce the energy consumption of products. Based on the concept of sustainable development of green synthetic manufacturing, we encourage all employees to make reasonable suggestions on energy conservation and carbon reduction, and reward the proposers of rationalization proposals that have achieved significant results after implementation, in accordance with the regulations.



Energy-saving and emission reduction training

In order to enhance the professional capacity of employees in addressing climate change risk and promoting energy-saving and carbon reduction, Meihua Group conducted a series of training activities throughout 2024 on energy-saving strategies, relevant policies, and standards. The training content included the interpretation of the national carbon neutrality development trend, the energy-saving and energy-reduction strategies of the same industry, the current energy consumption situation of the Company, and the energy-saving and energy-reduction planning strategies. The number of participants reached 200, and the total training duration reached more than 800 hours.

Carbon reduction by supply chain coordination

Meihua Group is actively engaged in carbon reduction initiatives and views the supply chain as a key component of its carbon reduction efforts. The Company understands that the effectiveness of carbon reduction in the supply chain has a profound impact on achieving overall carbon reduction goals, and actively promotes supplier participation in carbon reduction initiatives. During the reporting period, the coverage of the supplier carbon reduction plan is as follows:

Indicator	Unit	2024
Coverage of supplier carbon reduction plan	Percentage	42%

Energy-saving and Carbon Reduction Measures

Carbon reduction by optimization of production processes



Technological transformation

- **Energy-saving transformation project of synthetic ammonia steam pipe network and air separation turbine**

Although the pressure of the low-pressure steam pipe network for the synthetic ammonia air compressor meets the production demand of the original unit, the steam consumption of the air separation turbine is too high. This project aims to address the high energy consumption of the turbine and ultimately achieve carbon reduction goals. In 2024, the Company optimized the steam pipe network and the air separation turbine along with its auxiliary equipment, taking nearly one year and with a total investment of approximately RMB 13.4 million. After the improvement, the steam consumption per unit decreased, saving about 16,000 tons of standard coal.



Optimization of xanthan gum process

- **Optimization of Xanthan Gum process at Jilin Base**

A new Xanthan Gum factory was established at Jilin Base, utilizing a continuous extraction process and replacing single-effect evaporators with multi-effect evaporators, resulting in an 11% reduction in product steam consumption and an annual steam saving of 54,000 tons. It is expected to save 7,700 tons of standard coal throughout the year, reducing carbon emissions by 20,000 tons.

- **Optimization of Xanthan Gum process at Xinjiang Base**

The Xanthan Gum extraction process at Xinjiang Base was enhanced by upgrading equipment, improving single-effect and double-effect towers to a three-effect tower, successfully reducing product steam consumption, with an expected annual saving of 42,551.2 tons of standard coal.



Waste heat recovery system

- **Energy-saving technical transformation of starch boiler**

In 2024, Xinjiang starch workshop boiler added a set of evaporating tower system, where the waste heat from flue gas will be recovered through a heat exchanger. The recovered steam will be used for evaporative purposes, replacing the use of live steam. The project has been completed, and the tail gas recovery heat can save steam volume of 9T/h per hour. It is estimated that 10,000 tons of standard coal will be saved and 2.6 tons of carbon will be reduced.



Heat and power cogeneration system

Each production base produces high-pressure steam using fuel coal at the heating station, which is then used to generate electricity for various workshops. The low-pressure steam generated is used for sterilization in fermentation workshops and for concentration and distillation in extraction workshops. The primary condensate is returned to the power plant to produce high-pressure steam, achieving the purpose of carbon reduction.

Carbon reduction by energy supply technical transformation

The Company deepens its green production system to promote energy-saving transformation alongside clean energy alternatives.

Energy-saving transformation

At the Xinjiang Base, by implementing the low-pressure steam pipe network operation optimization project for heating station, the overall steam consumption rate of the power plant was reduced by 0.2 Kg/kWh by precisely adjusting the external supply pressure parameters. It is estimated that the annual standard coal would be saved by 33,800 tons and the carbon emissions will be reduced by 87,800 tons.

PV power generation

In 2024, the Company actively responded to the call of the national clean energy development strategy and built PV power projects in Tongliao and Jilin Bases respectively in line with the concept of green and sustainable development. The contracts have been signed, and the projects have entered the execution phase, with clean energy being gradually introduced into the plant's PV power generation, showing significant results. After being put into operation, the total annual electricity generation is expected to be 35.52 million kWh, with an estimated annual reduction of carbon emissions by 10,900 tons. Meanwhile, the PV project at the Xinjiang Base has fully connected to the grid for power generation in its two phases, continuously increasing the proportion of clean energy and injecting green momentum into the energy supply system for production, thereby solidifying the foundation for low-carbon transformation through multiple pathways.

Carbon Footprint Certification

In 2024, Meihua Group continues to promote green certification work for product carbon footprints and water footprints. After the certification of MSG and lysine products, the Jilin Base has completed the carbon footprint and water footprint certification for food-grade and industrial-grade xanthan gum products. Tongliao Company has simultaneously carried out carbon footprint and water footprint certification work for MSG products and obtained certificates, marking a further advancement in the Company's sustainable development efforts.

Carbon footprint verification for xanthan gum products in Jilin Base



The carbon footprint is 10.53 tCO₂ e/t for food-grade xanthan gum, and is 10.87 tCO₂ e/t for industrial-grade xanthan gum.

Carbon Footprint Certification of MSG Products of Tongliao Base



The carbon footprint of MSG products is 2.46tCO₂e/t.

Environmental Compliance Management

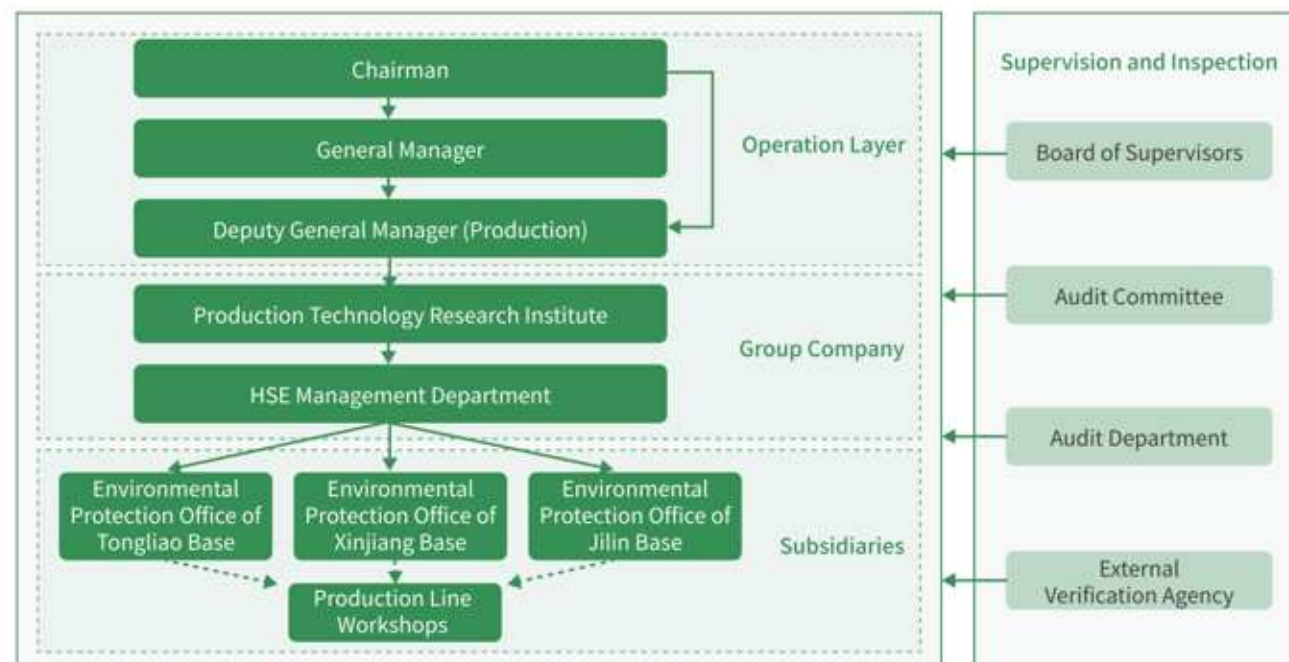
Except for Tongliao Base, Xinjiang Base, and Jilin Base, other wholly-owned subsidiaries of the Company are not key pollutant discharge entities as classified by the environmental authorities. Those subsidiaries include Langfang Meihua Condiments Co., Ltd. and Tongliao Meihua Condiments Co., Ltd., which are engaged in the packaging and sales of condiments; Lhasa Meihua Bio-investment Holdings Co., Ltd., which is engaged in external investment; Xinjiang Base Investment Company, which is engaged in the foreign sales of products and the import and export of goods; Meihua Group International Trading (Hong Kong) Limited, which is a trading company responsible for exporting the Company's products; Meihua (Shanghai) Biotech Co., Ltd., which is engaged in technology development.

The three key subsidiaries under Meihua Group are classified as key pollutant discharge entities by the environmental authorities. The pollutants discharged mainly include wastewater and waste gas. The key monitoring indicators for waste gas are fume, SO₂ and NO_x, and those for wastewater are COD and ammonia nitrogen. During the reporting period, the verified total discharge of Tongliao Base, Xinjiang Base, and Jilin Base did not exceed the permitted total discharge, and the pollutant discharge concentrations at all discharge outlets are within the national limits.

Governance

Environmental Management System

Meihua Group strictly complies with the requirements of the Environmental Protection Law of the People's Republic of China and other laws and regulations, and has developed a series of internal management systems based on the Company's actual situation. At the company level, it has issued systems such as the Management System for Stable Odor Compliance, the Management System for Stable Operation of Sewage Workshop, and Hazardous Waste Management Regulations (Trial); each production base has developed internal documents such as the Environmental Management System, Water Intake and Discharge Management System, Pollutant Discharge Management System, Environmental Protection Monitoring System, and Energy Saving and Consumption Reduction Management System in accordance with the Company's environmental protection requirements; Jilin Base has formulated the Environmental Facility Inspection Management Regulations and Environmental Hazard Management Regulations based on the operation of the MES system launched in 2024, to improve the existing management systems. In 2024, the environmental protection office of each base strictly implemented the Company's requirements and compiled the environmental management systems, further enhancing the comprehensive level of the Company's environmental management, ensuring that the Company's environmental protection work is governed by regulations. Each production base effectively implements environmental management in accordance with the principles of "prevention first, source control, terminal treatment, discharge to standard" and "whoever is in charge is responsible."



The Company has established a tiered salary performance assessment standard for employees related to environmental protection based on the corporate salary management system, and using the number of key point alarm occurrences as an important assessment basis, conducts phased assessments annually, quarterly, and monthly. Relying on the Company's problem database, business departments can carry out projects targeting key issues and set project incentives to motivate employees, ensuring that environmental protection requirements are implemented.



Environmental Management Measures

The Company continuously strengthens the normalization of environmental protection management and improves management efficiency by establishing standardized management processes and applying information technology.

Building an environmental management table:

automatically publish inspection tasks every day, staff can report relevant hidden dangers online, and automatically generate analysis curves to strengthen normalized management and control.

Building an environmental management diagram:

establish an environmental monitoring platform to view the online data of the outlet, the operation status of environmental protection facilities, the alarm information of key points and the real-time monitoring of special inspections, so as to improve the level of refined environmental management.

Relying on the key point graded alarm program:

realize the graded response of environmental risks, make the key points return to the standard quickly through the step-by-step alarm, and solve the problems that are difficult to solve in the workshop through the planned disposal.

Environmental Management System Certifications




In 2024, the Company organized and successfully passed the environmental management certification, achieving 100% coverage of the ISO 14001 environmental management system certification.



Strategy

Based on the current industry and the operational status of the industrial chain, the Company assessed the risks, opportunities, and impacts it faces, clarifying the strategic guidance direction.



Risks/Opportunities	Risks		
Type	Environmental pollution risks	Physical risks	Risk of changes in environmental protection policies
Description of Risk	The Company generates a large amount of high-concentration organic wastewater, fermentation residues, and other pollutants during its production process. If not treated properly, they will pose a significant threat to the environment and result in high pollution treatment costs.	The Company faces local water scarcity or drought, etc., which may affect its normal operations and increasing its costs.	Tighter environmental protection policies may lead to higher standards and requirements for enterprises.
Financial Impact	Cost increase	Cost increase	Cost increase
Impact Period	Medium to long-term	Medium-term	Medium to long-term
Degree of Impact	Large	Medium	Medium
Likelihood of Occurrence	Low	Low	Medium
Value Chain Segment Affected	Operations	Operations	Operations, downstream
Counter measures	Adopt modern technology and strict environmental protection measures to reduce pollutant discharge.	Improve water use efficiency and promote water resource recycling.	By strengthening the R&D and application of environmental protection technologies, improve the environmental performance of products to meet policy requirements

Note: we define short-term, medium-term and long-term impact cycles as 1-3 years, 3-5 years, and more than 5 years, respectively; large, medium and low impact levels as serious, moderate and slight impacts on the Company's production and operations, respectively; and high, medium and low likelihoods of occurrence as very likely to occur, more likely to occur, and less likely to occur, respectively.

Opportunities		
Opportunities for innovation of environmental technology	Resource efficiency	Policy support opportunities
The innovation and application of environmental technology can enhance the environmental performance of	Use efficient equipment or intelligent energy management systems.	The government may introduce relevant policies to support the environmental protection and sustainable development of the biogas fermentation industry
Revenue increase	Cost decrease	Revenue increase
Long-term	Long-term	Medium to long-term
Large	High	Medium
Medium	High	Medium
Operations	Operations	Operations
Increase investment in R&D to promote the innovation and application of environmental technology, improving the environmental performance of products and market competitiveness	Build an integrated energy and water management system to monitor energy and water in real-time, thus improving the efficiency of resource use.	Closely pay attention to policy trends, and actively apply for policy preferences and subsidies to reduce corporate cost



Management of Impacts, Risks, and Opportunities

Environmental Protection Special Audit

To promote the Company's green development, the Company's Audit Department leads the environmental protection special audit every year. Before the audit, a targeted plan will be developed to clearly define the audit scope covering production, office areas, and ancillary facilities. During the audit, staff will go to the front line to check the operation of environmental protection equipment, pollutant discharge status, and review the environmental protection documents. This initiative aims to accurately identify the loopholes in environmental management, urge rectification, reduce environmental risks, enhance management levels, and support the Company's sustainable development.

Risk Management and Emergency Response Plan

The Company complies with the requirements of the Emergency Response Law of the People's Republic of China, the National Environmental Emergency Response Plan, the Environmental Protection Law of the People's Republic of China, the Water Pollution Prevention and Control Law of the People's Republic of China, and the Air Pollution Prevention and Control Law of the People's Republic of China to prevent and actively respond to potential environmental emergencies, handle such emergencies in a rapid, affective, and orderly manner, and maintain the normal work order of the Company. In accordance with the latest national laws and regulations as well as relevant requirements, Meihua Group observes the principle of "prioritizing prevention and self-rescue, unifying command and coordination, implementing accountability, and combining corporate self-rescue and social rescue" based on its actual situation in a bid to avoid and minimize the impact of emergencies on personnel, equipment, property, and in particular, the environment. The Company strives to improve its capabilities for reducing environmental pollution, preventing accidents, emergency responses, and aftermath handling. Tongliao Base, Xinjiang Base, and Jilin Base have all developed emergency rescue plans for environmental pollution accidents, filed them with the local environmental authorities, and organized emergency drills according to the requirements every year. The Tongliao Base, Xinjiang Base, and Jilin Base have all developed emergency rescue plans for environmental pollution accidents, which have been filed with the local environmental protection bureaus, and organize emergency drills annually as required.

Indicators and Targets

Key Performance	Unit	2024
Investment in environmental protection funds	RMB 10,000	6,851
Pollutant monitoring compliance rate	Percentage	100%
Environmental Violations	Case	0



Utilization of Water Resources and Water Conservation Measures

Water Management System

The Company strictly implements the Management Measures for Water Resources of Meihua Group, and in combination with the sustainable development governance system, continues to improve the three-level water resources management structure of the Company, production bases and production units to strengthen the coordinated management and control capabilities of each production base and production unit. In terms of water resource utilization, by optimizing production processes, recycling water, and promoting efficient water-saving technologies, the Company enhances water resource efficiency to achieve water conservation, effectively controlling water-related risks, and creating a water-saving enterprise, thus protecting water resources through practical actions. In addition, the Company continuously strengthens water resource compliance management to ensure that all bases strictly adhere to relevant laws and regulations. The Company has established a relatively complete Management System for Stable Operation of Sewage Workshop, and the Environmental Protection Office and workshops strictly implement the standard system to assess the abnormal discharges from the workshops. In 2024, all bases of Meihua Group continued to maintain a record of no water-related violations.

Identification and Impact of Water Resource Risks

In 2024, Meihua Group continued to strengthen water resource management, deepened water resource risk identification and optimized the utilization strategies to improve water resource efficiency and reduce the operational impact on the water environment. Through the water risk analysis tool of the World Resources Institute (WRI), the Company has reassessed the water resource risks of all operational bases. The results show that due to the geographical limitations of the Company's production bases, water extraction still mainly comes from high-risk areas, and the proportion of crops procured from areas with high or extremely high baseline water pressure has not changed significantly. These challenges prompt the Company to further optimize water resource management strategies and adopt stricter water-saving measures. The Company will further strengthen water resource performance management, regularly assess water resource usage, and promote targeted water-saving measures at each production base.

Water Resource Utilization Indicators

2024 Key Performance >>>>

Total water intake	35,361,776 Ton
Total water consumption	54,980,998 Ton
Water resource recycling amount	18,023,399 Ton
Alternative water usage	2,000 Ton
Proportion of water intake from high-risk areas	100%
Percentage of crops purchased from areas with high or extremely high baseline water pressure	100%

Water Footprint Certification



| Wastewater Management

All three bases have installed online monitoring equipment at their wastewater discharge outlets, which are interconnected, and conduct regular third-party testing, with pollutant discharge indicators meeting standards.

The Tongliao Base, Xinjiang Base, and Jilin Base have made achievements in wastewater treatment. The Tongliao Base has invested RMB 250.41 million to establish a microbial protein and organic fertilizer workshop to address the high concentration organic wastewater generated from amino acid production, achieving resource utilization of waste; and made significant investments to establish and upgrade wastewater treatment systems for the treatment of low-concentration wastewater, with an additional investment of RMB 150 million to build a reclaimed water reuse workshop. This year, a new MSG project has been expanded to include a wastewater treatment station, adding a 10,000 m³/d treatment system, with a total treatment capacity reaching 44,150 m³/d.

The Xinjiang Base reduces water consumption by adopting a tiered utilization and recycling approach, converting high-concentration wastewater into organic fertilizer, creating an interactive model with corn farmers through complimentary fertilizers. The base invested RMB 500 million in the wastewater treatment station, utilizing advanced technology for automated control, with ANAMMOX sludge cultivated for sale domestically and internationally, and the biogas generated from wastewater providing energy for the workshop. It made an additional investment of RMB 35 million to construct a reclaimed water reuse project, saving 10,000 cubic meters of water daily.

The Jilin Base invested nearly RMB 120 million in wastewater treatment workshop, employing a five-stage biological treatment process, with the anaerobic reactor utilizing a third-generation ICX reactor, achieving high treatment efficiency. The base continues to advocate energy conservation, emission reduction, and clean production, with a daily emission reduction of nearly 2,000m³/d in 2024, and an international leading level of clean production.

Data On Water Pollutant Emissions >>>>

<div>26,330,709 Ton</div> <div>Total volume of industrial wastewater</div>	<div>876,234 Ton</div> <div>Total volume of domestic wastewater</div>	<div>2,185.68 Ton</div> <div>Chemical oxygen demand (COD)</div>
<div>263.27 Ton</div> <div>Ammonia nitrogen (NH3-N)</div>	<div>841.70 Ton</div> <div>Total nitrogen (TN)</div>	<div>79.77 Ton</div> <div>Total phosphorus (TP)</div>

| Waste Gas Management

• Treatment of Fume From Boilers

In treating fume from boilers, the Company uses electrostatic fabric filter, ammonia desulfurization, and SNCR denitration technologies. Upon treatment, the fume emission concentration is far below the limits set by the Emission Standard of Air Pollutants for Thermal Power Plants, thus achieving the "ultralow discharge" standard. The denitration technology used by the Company converts NOx into N2 and H2O through reaction without causing secondary pollution. The ammonia desulfurization technology uses NH3 and SO2 reaction as the basis, and in the multi-functional fume desulfuration absorber tower, ammonia absorbs SO2 from fume and oxidizes it into ammonium sulfate. The byproducts happen to be usable in the Company's production of amino acids. It brings double benefits to the Company: meeting the requirements of pollutant discharge and recycling resources.

The fume discharge outlets of Tongliao Base, Xinjiang Base, and Jilin Base all have online surveillance equipment, which is connected with the networks of environmental authorities to monitor the Company' s fume discharge in real time, and the flue gas indicators of the three subsidiaries can all meet the requirements of ultra-low emission standards.

• Treatment of Organized Odors

In treating organized odor emissions, the Company uses a combination of advanced treatment technologies, including dedusting, washing, cooling and dewatering, catalytic oxidation, cryocondensation, DDBD (double dielectric barrier discharge), photoelectrocatalysis, activated carbon adsorption, and biological deodorization. All odors are discharged through three to nine tiers of treatment. Among them, the Xinjiang Base invested RMB 3 million to replace outdated waste gas treatment processes and equipment, and to build new odor treatment equipment, replacing the wastewater photo-oxidation equipment with biological deodorization equipment. so as to make the odor concentrations at the discharge outlets achieve the requirements of the Emission Standard for Odor Pollutants (Exposure Draft) ahead of the deployment by the Ministry of Ecology and Environment. Meanwhile, the Company continuously develops creative methods using domestic and foreign advanced technologies, including multi-tiered washing, cooling and dewatering, electrostatic defogging, low-temperature plasma treatment, deep oxidation, and activated carbon absorption, to treat fermentation odors and the exhaust from product drying. The Company also achieves automatic control, making the treatment process more precise and stable.

• Treatment of Unorganized Odors

In treating unorganized odor emissions, the Company has installed closed collection devices to treat unorganized waste gas from production equipment and storage tanks and equipment. The collected waste gas is discharged after being treated by environmental devices, which solves the impact of unorganized waste gas emissions on ambient air quality. Further, through the continuous improvement of its internal management, the Company strives to eliminate the locations of unorganized diffusion and reduce indoor and outdoor odor concentrations.

• Treatment of Unorganized Dust

The Company spent hundreds of millions of RMB to reduce the unorganized dust produced from the storage and transportation of coal by building three completely closed coal yards. The yards are equipped with high-pressure fog ejectors that eject fog into the yards to prevent dust. In the plants, coals are transported in a fully closed way. The car dumper system has dry fog-based dust prevention devices to automatically eject fog when unloading coals. The transportation and storage of coal thoroughly eliminate the impact of unorganized dust.

• Data on Atmospheric Pollutant Emissions

Indicator	Unit	2024
Total emission of air pollutants	Ton	3,728.57
Emissions of particulate matter (PM)	Ton	434.6
Emissions of sulfur oxides (SOx)	Ton	1,434.85
Emissions of nitrogen oxides (NOx)	Ton	1,860.63
Emissions of volatile organic compounds (VOCs)	Ton	192.81



Waste Management

In the case of non-hazardous waste, domestic waste such as food waste and office waste are entrusted to qualified units for landfill treatment to ensure safe and environmentally friendly disposal; while industrial waste and dust are entrusted to qualified third parties for compliant disposal. The recyclable waste involved is classified and sold out to achieve the recycling and reuse of resources. For hazardous waste, Meihua Group adopts a centralized collection method, storing it in a temporary storage area within the factory, and then entrusting qualified third parties for compliant disposal. To ensure transparency and standardization in the disposal process, transfer and disposal information will be reported and filed in the National Solid Waste Management Information System. Moreover, the Company has established a comprehensive hazardous waste management system and formulated the Hazardous Waste Management Regulations (Trial) to detail the incoming records and outgoing records of the temporary storage area. Meanwhile, it has implemented a platform-based ledger recording method. All incoming and outgoing storage operations are completed through platform operations. The Environmental Protection Office and workshops strictly implement standard systems, providing dual guarantees for the compliance of hazardous waste disposal from process management and operational specifications. In addition, according to regulations, Meihua Group completed the replacement of 376 office computers throughout the year, generating a total of 2.33 tons of electronic waste. Such electronic waste was uniformly collected and managed by the IT department, and then handed over to external professional organizations for environmentally harmless treatment, strictly following environmental protection requirements to properly handle electronic waste.

Total volume of waste		1,553,120.78 Ton	
Hazardous waste	Density of hazardous waste (calculated per RMB 1 million of operating income)	0.02	Ton/RMB 1 million
	Total volume of hazardous waste generated	467.71	Ton
	Volume of waste vanadium pentoxide generated	0	Ton
	Volume of waste zinc oxide catalyst generated	37.72	Ton
	Volume of waste detection liquid generated	1.78	Ton
	Volume of waste paint bucket generated	9.10	Ton
	Volume of waste ink cartridge generated	1,644	pcs
	Volume of waste electronic garbage generated	2.33	Ton
	Volume of waste activated carbon generated	268.36	Ton
	Volume of waste nickel-containing catalyst generated	42.5	Ton
Non-hazardous waste	Volume of waste engine oil generated	100.91	Ton
	Empty waste reagent bottles	0.84	Ton
	Volume of waste toner cartridge generated	2,393	pcs
	Volume of waste battery generated	11,306	pcs
Total volume of non-hazardous waste generated		1,552,653.07	Ton
Non-hazardous waste	Volume of industrial waste generated	871,655.58	Ton
	Volume of dust generated	678,346.34	Ton
	Density of non-hazardous waste (calculated per RMB 1 million of operating income)	61.93	Ton/RMB 1 million

Green Packaging Materials

Under the guidance of global sustainable development trends and the "carbon peaking and carbon neutrality" goals, Meihua Group always adheres to the green and low-carbon development concept, and is committed to building a resource-saving and environmentally friendly enterprise. While continuously expanding production scale, the Company actively promotes resource recycling by adopting green packaging materials and recycling of packaging materials, and reducing the use of packaging materials, so as to optimize the resource utilization efficiency, and minimize the environmental impact of packaging materials. In 2024, the Company strictly implemented the Green Packaging Materials Procurement Strategy and System of Meihua Holdings Group Co., Ltd. to promote the use of eco-friendly packaging, systematically sort existing packaging materials, optimize packaging design, and select suppliers to advance the implementation of environmentally friendly packaging solutions, ensuring that the concept of green development is integrated into every aspect of supply chain management.

Optimization and reduction of use of packaging	Recycling of packaging materials	2025 Goals
The Company reduces the lining width of fertilizer and MSG product packaging by optimizing packaging dimensions, thereby decreasing the ineffective area of packaging materials and reducing waste. Through design, testing, and tracking customer usage, a total weight reduction of 120 tons was successfully achieved throughout the year, with a target completion rate of 64%.	The Company achieved packaging material recycling by using woven packaging made from by-products produced from renewable materials, recycling 1,098 tons.	In 2025, Meihua Group will continue to promote the green packaging materials strategy, develop and promote new low-carbon and environmentally friendly packaging materials to reduce the use of traditional materials; optimize the packaging size of fertilizer bags to reduce the consumption of packaging materials per unit of product; and reduce the amount of ink used in packaging to reduce the pollution of packaging materials to the environment. The Company plans to reduce the weight of packaging by 20 tons for the whole year in 2025, and continue to promote the reduction and recycling of packaging materials.

Packaging material consumption in 2024 >>>>

28,000 Ton	750 Ton	3,600 Ton	1,900 Ton
Primary plastic category	Primary paper category	Secondary wood category	Secondary paper category

Biodiversity Conservation

The Company integrates ecosystem and biodiversity conservation into daily management based on the actual operational status of production, covering important aspects such as waste management and pollutant emissions, supporting ecosystem and biodiversity conservation. All waste generated by the Company is handed over to a qualified third-party organization for non-hazardous treatment, avoiding pollution to soil, water bodies, and surrounding ecosystems. The waste gas and wastewater generated by the Company are discharged only after meeting standards through process treatment, minimizing the impact on surrounding biological habitats. The Company helps mitigate the threats to global biodiversity by reducing the indirect impact of fossil energy use on climate change. In the future, the Company will gradually establish an ecosystem and biodiversity conservation system through pollution prevention and control, ecological restoration, and compliance management, responding more actively to the global Convention on Biological Diversity (COP15) initiative and contributing to global sustainable development.

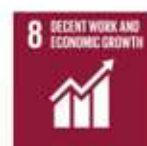
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Social Responsibility



Fulfilling social responsibility is an important mission and value of an enterprise, and at the same time, the sustainable development of an enterprise must be based on the industrial chain synergy and the co-construction with communities. For this reason, in terms of industrial chain collaboration, we transfer ESG concepts to the industrial chain through the supply chain management system to gather strength and create social value with responsibility and consensus. In terms of organizational support, we continuously improve human resource management mechanism with a people-oriented concept to protect the rights and interests of employees and their development, build a good working ecosystem, and strictly abide by the red line of production safety. In terms of social participation, we continue to plough into the public welfare cause, interpret responsibility with action, and make enterprise development resonate with social progress.

Supply chain security	69
Human resources management	74
Work safety	85
Rural revitalization and social contribution	93



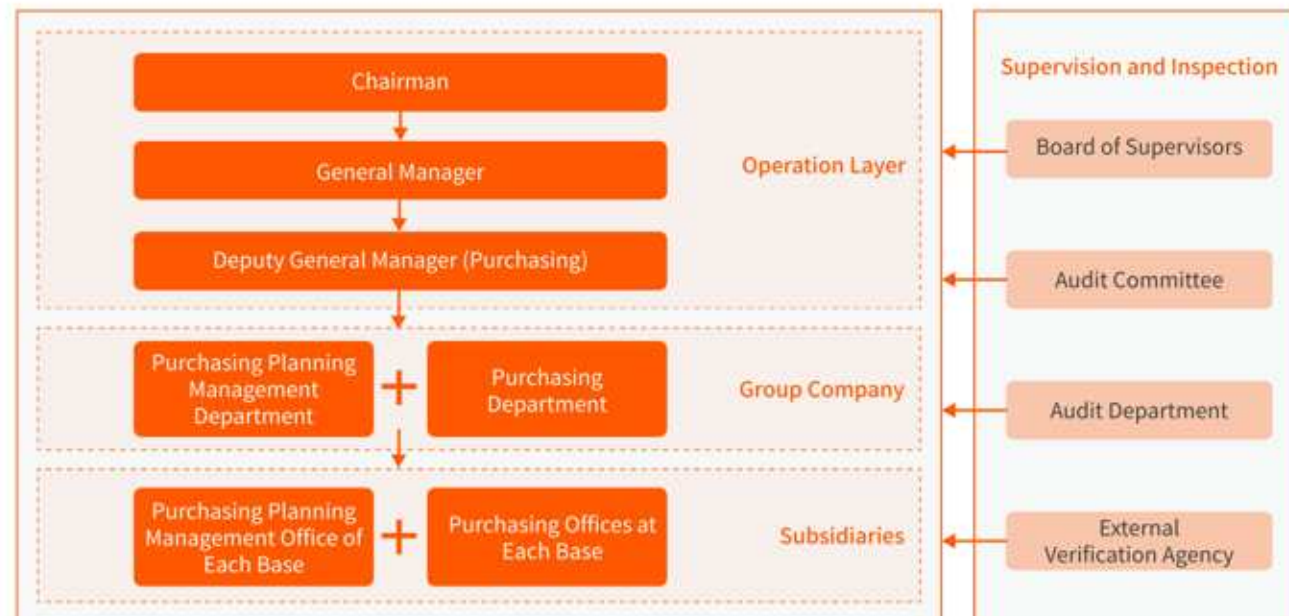
Supply Chain Security

Based on the vision and mission of "Value Sourcing for Excellence," with our strong supply chain capabilities, industry influence, and market expertise, we are committed to creating a more sustainable future with suppliers. We will promote our procurement system toward sustainability and responsibility, and advance broader sustainable procurement practices.



Governance

The Company's Procurement Planning Management Department coordinates with the Procurement Department, responsible for the construction and implementation of the Company's procurement system, as well as the formulation and execution of procurement strategies and plans; the subsidiaries carry out their procurement operations by establishing Procurement Planning Management Offices and Procurement Offices. Through the linkage of the three levels of management, the, and subsidiaries, we jointly build a sustainable supply chain management system.



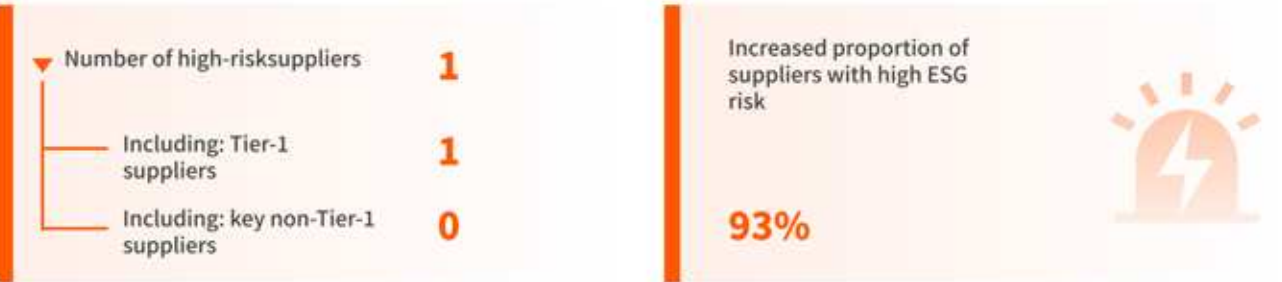
Strategy

To standardize the supplier management process, control the procurement process, and ensure that the procurement materials and activities meet regulatory requirements, the Company identifies and analyzes the potential risks and opportunities in the supply chain management process and provides countermeasures.

Risks/ Opportunities	Risks		Opportunities	
Type	Operational risks	Procurement risks	Policy opportunities	Market opportunities
Description of Risks/ Opportunities	Production bases may be affected by uncontrollable factors such as extreme natural conditions, leading to disruptions in logistics and transportation, hindering raw material supply and product delivery, thereby increasing operating costs.	Meihua Group's production relies on raw materials such as corn and soybean protein, the prices of which fluctuate greatly due to factors such as natural disasters, geopolitical issues, and international market supply and demand.	With the increasing awareness of environmental protection and the policy promotion, green supply chains may become an industry trend. For example, government subsidies or policy support for using environmentally friendly packaging materials and for optimizing transportation routes to reduce carbon emissions.	The amino acid industry is highly competitive, with opportunities for industry consolidation. Companies can achieve resource integration and expand market share through M&A and cooperation, thereby enhancing their competitiveness in the industry
Financial Impact	Cost increase	Cost increase	Revenue increase	Cost decrease, Revenue increase
Impact Period	Short-term	Short to medium-term	Short-term	Long-term
Degree of Impact	High	High	Medium	High
Likelihood of Occurrence	Medium	Medium	High	High
Value Chain Segment Affected	Operations	Operations	Operations	Operations
Counter measures	Optimize the logistics distribution system, comprehensively consider various factors, and develop flexible distribution plans; Expand logistics partners, diversify logistics risks, and strengthen supervision and management of logistics links.	Strengthen strategic cooperation with suppliers, and build a solid cooperation model to ensure price stability; Optimize procurement strategies, closely monitor market dynamics, and flexibly adjust procurement pace.	Actively build a green supply chain, Closely monitor policy dynamics, deeply interpret policy content, and gradually optimize the supply chain layout guided by policies	Develop clear strategic plans, and focus on industry trends to actively seek cooperation opportunities; Strengthen internal management and operational capacity building to achieve coordinated development.

Note: we define short-term, medium-term and long-term impact cycles as 1-3 years, 3-5 years, and more than 5 years, respectively; large, medium and low impact levels as serious, moderate and slight impacts on the Company's production and operations, respectively; and high, medium and low likelihoods of occurrence as very likely to occur, more likely to occur, and less likely to occur, respectively.

Management of Impacts, Risks, and Opportunities



Indicators and targets

Indicator	Unit	2024
Proportion of cost of food raw materials that have obtained third-party certification	Percentage	98%
Proportion of products with raw materials traceable to the place of origin	Percentage	100%



Supply Chain Management Measures

Supply Chain Compliance Management and Control

Meihua Group attaches great importance to supply chain compliance management, strictly observes the Anti-Corruption Management Measures of Meihua Holdings Group Co., Ltd., and has formulated the Supplier Code of Conduct of Meihua Holdings Group Co., Ltd., which covers labor and human rights, health and safety, environmental protection, ethical standards, and corporate governance, to regulate supplier conduct and create a transparent and open procurement environment.

The Company integrates the concept of sustainable development into the management of the whole supply which extends from the procurement of raw materials, such as corn and coal, to the partnership with downstream logistics companies and retailers, and is always committed to providing customers with high-quality green products and fulfilling corporate social responsibility. Since the Company formulated the Environmental and Labor Human Rights Sustainable Procurement Policy of Meihua Holdings Group Co., Ltd. in 2022, it has continuously regulated the behavior of contractors, suppliers, and other business partners, practicing the concept of sustainable procurement and building a sustainable supply chain.

The Company continues to improve its supplier management system and comprehensively promotes sustainable procurement, prioritizing suppliers with "environmental certification" in its procurement. The company also strengthens supplier access standards and assessment mechanisms, clearly requiring partner suppliers to sign the Basic Agreement for Environmental and Social Compliance of the Suppliers of Meihua Group to ensure that they fulfill their responsibilities in environmental protection, social responsibility, and labor protection. Suppliers who violate relevant regulations will be blacklisted and may have their trading qualifications suspended for a specified period or permanently.

In 2024, the proportion of the Company's suppliers signing the Basic Agreement for Environmental and Social Compliance of the Suppliers has reached 76%.



Responsible Procurement

Meihua Group strictly follows the Suppliers' Responsible Procurement Management Measures of Meihua Holdings Group Co., Ltd., fully integrates the concept and requirements of sustainable development into the entire procurement process, and continuously improves the level of supply chain management through full-process management of suppliers to ensure the compliance of suppliers in terms of environmental protection, social responsibility and corporate governance.

Supplier admission

Meihua Group strictly follows industry standards and the ESG Management System of Meihua Holdings Group Co., Ltd. for Suppliers, giving priority suppliers that have obtained various certifications (product quality and safety, employee occupational health and safety, environmental management, green products, etc.). For suppliers identified as high-ESG-risk, we will require them to provide ESG-related certification materials. For suppliers identified as medium-ESG-risk, we will prioritize enterprises that can provide ESG-related certification materials to ensure the compliance of suppliers with sustainable development requirements.

Supplier ESG assessment

Meihua Group regularly conducts ESG assessments for admitted suppliers according to the Supplier ESG Assessment Criteria, during which we will comprehensively examine suppliers' performance in labor and human rights, health and safety, environmental protection, business ethics, etc. through questionnaires, on-site audits, real-time videos, etc., and will form a Supplier ESG Assessment Form to score admitted supplier.

Communication with Suppliers

Meihua Group is committed to establishing long-term, stable, and mutually beneficial cooperative relationships with suppliers. We encourage suppliers to actively participate in the Company's communication activities, jointly exploring how to reduce costs, improve quality services, promote low-carbon technologies, and protect human rights, achieving information sharing and complementary advantages.



Equal Treatment of Small and Medium-sized Enterprises

Meihua Group always insists on respecting and treating small and medium-sized enterprises equally, operating with integrity, and helping to build a win-win business ecosystem.

The Company continuously optimizes the financial payment process to shorten the account period, avoiding operational risks for small and medium-sized enterprises due to overdue payments; the Company strictly abides by contractual agreements to timely pay the accounts of small and medium-sized enterprises, improves capital turnover efficiency, alleviates financial pressure on small and medium-sized enterprises, and builds a stable and sustainable supply chain to promote the development of small and medium-sized enterprises.

At the end of the reporting period, the balance of the Company's accounts payable (including notes payable) was far below the disclosure conditions, and there were no overdue payments to small and medium-sized enterprises.

Human resources management

Meihua Group adheres to the business philosophy of "full-staff operation, creation and sharing" and follows the management principles of "Three Fair and One More" and "Three High and One Low," that is, we pursue the principle of fairness, impartiality and openness to select more excellent cadres, the highest salary level in the same region, the highest salary level in the same industry, the highest per capita contribution, and the lowest per capita cost in the industry.

Governance

Full-staff Operation, Creation and Sharing

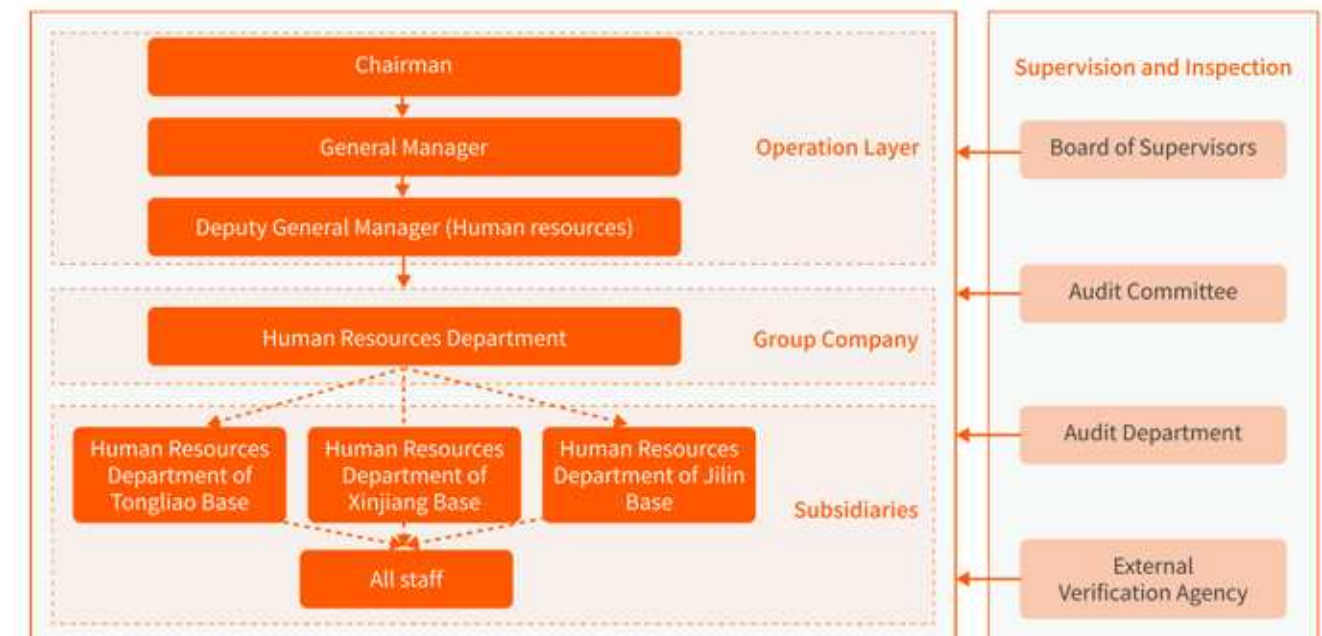
Meihua Group has always been "people-oriented" and continues to implement the business philosophy of "full-staff operation, creation and sharing." We attract talents to join with competitive salaries and incentive mechanisms, and create an equal, diverse and inclusive cultural environment for employees to retain talents. The Company relies on a comprehensive, multi-dimensional and effective systematic method to cultivate talents, smooth career promotion channels to enhance the career drive and innovation capabilities of employees and the enterprise, so as to jointly build a sustainable human resource management system to achieve mutual growth between employees and the enterprise.

By 2024, the human capital system invested in the education, training, and development of employees to improve the economic efficiency of the enterprise. The return on investment in human capital was **175%**.

Meihua Group takes the initiative to assume social responsibility to solve the employment problems of the disabled and other vulnerable groups. As of the end of the reporting period, the Company had a total of **12858** employees, including about **87** disabled employees, accounting for **0.68%** of the total number of employees.

Organizational Structure

The Company's Human Resources Department is responsible for the construction of the Company's human resource management system, employee recruitment, compensation and benefits, labor rights, and employee training, while each subsidiary establishes a Human Resources Administrative Vice President to implement relevant human resource management work, with the human resources specialists responsible for execution. The Company fully protects employees' rights and interests through a comprehensive organizational structure and management system.



• Precise Recruitment to Reserve Future Talents

The Company has always believed that "talent" is the core driving force behind the rapid development of enterprises, and continuously optimizes the integrated talent management model of "recruitment, selection, training, and retention." The Company recruits outstanding fresh graduates from universities through the "Aim High Management Trainee Program" and provides comprehensive support and training for talents through a model of "onboarding training + executive mentoring + project practice." As of now, the Company has introduced a total of 258 management trainees from universities, including 33 PhDs, 147 masters, and 78 bachelors. In 2024, the Company plans to introduce 115 management trainees from various universities, including 17 PhDs and 71 masters, featuring high-end talents from "Double First-Class" universities such as Tsinghua University, Peking University, Nankai University, and Tianjin University. In the process, we have established school-enterprise cooperation with colleges and majors that align closely with the Company, such as Tianjin University and Jiangnan University, to ensure talent reserve and cadre training.

• Build An Efficient Management System To Drive Human Resource Transformation Through Digitalization

In 2023, the Company launched a human resource informatization construction project, collaborating with Inspur, a leading enterprise in information technology, to develop a human resource management system. The project was implemented in two phases: the first phase was launched June 2023, covering the templates of organization and personnel, attendance, salary performance and cadre files, through which, the human resources management system was leapfrogged from 0 to 1, and all basic work was improved by more than 50%, and at the same time, the human resources management processes were standardized; the second phase was launched in August 2024, adding capability certification, "Small Wins," and talent assessment modules. Now, users can conduct online work and share information in real-time through both PC and mobile platforms. All HR operations are documented online, and business management processes, regulations, and standards are publicly available online. Each business department can also understand the status of personnel within their teams in real-time, achieving full-process online control and information sharing. Information technology has significantly improved work efficiency, reduced communication costs, and brought the Company's human resource management to a new level.

| Strategy

In the process of internationalization, the Company's talent strategy faces challenges in cultural integration and talent development, and will also usher in the opportunities for attracting talents and optimizing the management system. The Company will actively take effective measures to further improve the talent system, establish diverse teams, enhance international competitiveness, and achieve steady development.

The Company is currently undergoing SA8000 certification, conducting human rights due diligence and assessments based on SA8000 standards, proactively identifying and assessing potential impacts and risks related to the respect for human rights.

Type of risks	Financial Impact	Impact Period	Degree of Impact	Likelihood of Occurrence	Value Chain Segment Affected
Risk of shortage and loss of high-skilled talents	Cost increase	Medium-term	Medium	Medium	Operations
Risks from cultural integration and cross-cultural communication	Cost increase	Short to medium-term	Low	High	Operations
Risks of changes in policies, regulations, and employment environment	Cost increase	Medium to long-term	Medium	Medium	Operations
International talent reserve and training risks	Cost increase	Medium to long-term	Medium	High	Operations

Note: we define short-term, medium-term and long-term impact cycles as 1-3 years, 3-5 years, and more than 5 years, respectively; large, medium and low impact levels as serious, moderate and slight impacts on the Company's production and operations, respectively; and high, medium and low likelihoods of occurrence as very likely to occur, more likely to occur, and less likely to occur, respectively.

Risks

Risk of shortage and loss of high-skilled talents >>>>

The biotechnology industry has a very high demand for professionals in R&D, production, quality control, and other fields, but there is a shortage of talent supply. Meihua Group's inability to attract or retain core talents may affect R&D progress, the establishment of technical barriers, and production stability.

Countermeasures >>>>

Optimizing compensation and equity incentives: design a composite compensation system that includes performance-based bonuses and equity incentives, prioritizing coverage for R&D and core technology positions, in line with industry competitiveness levels. Deepening industry-university-research cooperation: jointly cultivate targeted talent with universities and research institutions, establish "Meihua Group-University Joint Laboratory" to secure high-quality graduate resources in advance.

Risks from cultural integration and cross-cultural communication >>>>

As the Company's overseas layout gradually advances, employees both domestically and internationally will face cultural differences and conflicts. Employees at overseas factories need to adapt to the new corporate culture, while existing employees must change their work habits, and cultural integration requires a transition period.

Countermeasures >>>>

Enhance cross-cultural communication by organizing cultural exchange activities and cross-cultural training to promote employees' understanding and respect for diverse cultures, fostering harmonious development. For example, hold multicultural sharing sessions and invite overseas employees to share local cultural customs to enhance mutual understanding.

Risks of changes in policies, regulations, and employment environment >>>>

China's labor regulations (such as social security contributions and overtime restrictions) are becoming stricter, and differences in regional policies may increase labor costs. In addition, the new generation of employees has higher demands for work environment and cultural inclusiveness, posing challenges to traditional management models.

Countermeasures >>>>

Dynamic policy response mechanism: establish a legal compliance team to track changes in labor regulations in real time (such as social security pooling policies in the Beijing-Tianjin-Hebei Region) and adjust employment strategies. Building an inclusive culture: conduct diversity training (such as cross-cultural communication and anti-discrimination courses) and establish an employee feedback platform (such as anonymous surveys and regular discussion meetings).

International talent reserve and training risks >>>>

Global operations require mid- and senior-level managers to have a global perspective and strategic thinking, which may lead to pressure in talent development and risks of insufficient talent reserves in the short term.

Countermeasures >>>>

Improve the talent training system, raise training standards, and focus on cultural awareness, management methods, and enhancement of employee quality. Cooperate with internationally renowned consulting firms to introduce advanced talent training concepts and methods for cultivating internationally-oriented talents with comprehensive abilities.



Strategy

Type of opportunities	Financial Impact	Impact Period	Degree of Impact	Likelihood of Occurrence	Value Chain Segment Affected
Opportunities for attracting international talents	Cost decrease	Long-term	medium	medium	Operations
Opportunities for optimizing the human resource management system	Cost decrease	Long-term	medium	medium	Operations
Opportunities in digital transformation technology	Cost decrease	Short to medium-term	High	High	Operations

Note: we define short-term, medium-term and long-term impact cycles as 1-3 years, 3-5 years, and more than 5 years, respectively; large, medium and low impact levels as serious, moderate and slight impacts on the Company's production and operations, respectively; and high, medium and low likelihoods of occurrence as very likely to occur, more likely to occur, and less likely to occur, respectively.

Opportunities

Opportunities for attracting international talents >>>>

With the establishment of overseas factories, the Company has to face the human resource competition from the domestic market to the global market.

Countermeasures >>>>

Develop a global talent development plan to establish a more diverse and internationally competitive management team. For example, attract top global talent to join the Company through channels such as overseas job fairs and international talent exchange platforms.

Opportunities for optimizing the human resource management system >>>>

With the establishment of overseas factories, the Company has to face the human resource competition from the domestic market to the global market.

Countermeasures >>>>

Strengthen international cooperation, learn advanced management concepts, and continuously optimize human resource policies and systems. For example, cooperate with international human resource management organizations to introduce advanced systems for performance management, compensation, and benefits, promoting the modernization of human resource management. By optimizing the compensation and benefits system, improve employee satisfaction and loyalty to enhance the Company's competitive advantage in the international market.

Opportunities in digital transformation technology >>>>

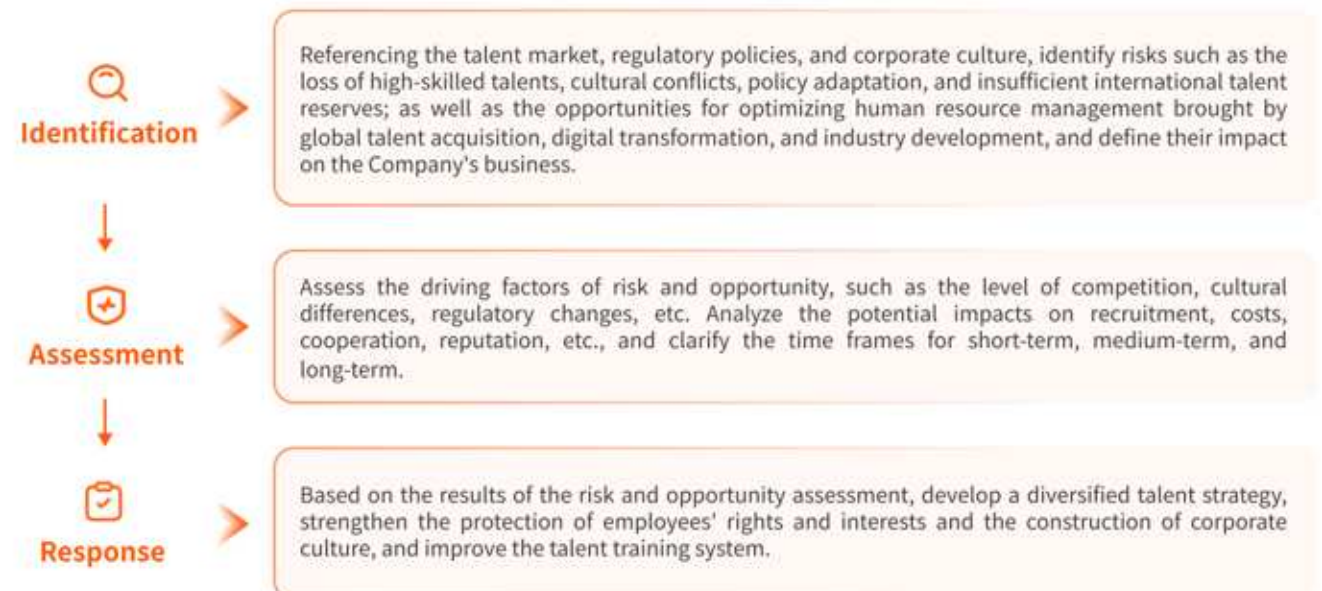
Technologies such as AI recruitment, big data analysis of employee performance, and virtual reality training can optimize human resource management processes, reduce operational costs, and enhance the scientific basis for decision-making.

Countermeasures >>>>

Deploy an intelligent HR system: introduce AI resume screening tools to reduce recruitment time; Utilize data analysis platforms to identify high-potential employees and customize personalized training plans. Virtual Reality (VR) skills training: develop immersive training modules for scenarios such as production line operations and equipment maintenance to enhance the efficiency of skill conversion.

Management of Impacts, Risks, and Opportunities

By identifying potential risks and opportunities through multiple dimensions, and comprehensively assessing their driving factors, impact scope, and time span, the Company continuously enhances the effectiveness of human resource management to provide solid human support for the Company's sustainable development.



Protecting Employees' Rights and Interests

The Company complies with national laws, collective bargaining agreements, and industry standards regarding working hours, attendance, leave, and public holidays, providing employees with reasonable working hours, salaries and benefits, and holidays, etc. The Company has established compliant, fair, and transparent recruitment and hiring procedures, and timely pays employee wages and social insurance contributions as required. The proportion of employees covered by the Company's collective bargaining agreement reached 100%.

Respecting for Human Rights

In order to systematically prevent the Company from human rights abuses such as violence, human trafficking, slavery, exploitation, and restriction of personal freedom, and ensure that the human rights and dignity of every employee are maintained, the Company has initially established a number of relevant systems and continues to implement the Human Right Protection and Anti-Violence and Conflict Policies, the Regulations on the Prohibition of Child Labor, the Regulations on the Prohibition of Forced Labor, the Anti-Harassment and Anti-Maltreatment Policy, and the Anti-Discrimination Policy, etc., and organizes each production base to regularly review labor conditions to protect the basic rights and interests of every employee.

The Company has implemented a series of preventive measures, such as strict audit and filing in the process of inputting employee identity information, so as to fundamentally prevent the occurrence of illegal employment behaviors such as child labor and forced labor; we have zero tolerance for discrimination, bullying, intimidation, and sexual harassment in the workplace, and are committed to providing employees with a comfortable, fair and secure working environment, and employees can submit anonymous reports through the Feishu platform.

In 2024, the Company conducted its annual human rights survey and assessment, with a coverage rate of 90%, an increase from 79% in 2023. During the reporting period, the Company did not commit any human rights abuses.

Respecting for human rights

- Insisting on equal employment

 - Obey the principle of fair employment and provide equal employment opportunities;
 - Respect the legal rights and interests of employees to conclude labor contracts and terminate labor relations on an equal footing according to law;
 - Promise to strictly implement the Regulations on the Prohibition of Child Labor and not to employ or support the employment of underage children;
- Working conditions and social protection

 - Create a good working environment, pay attention to the physical and mental health of employees, and provide sufficient development opportunities for employees;
 - Provide employees with good working conditions, including wages, working hours, rest time, holidays, etc., to implement gender equality and equal pay for equal work, to respect employees' rights to rest and leisure, to provide employees with paid holidays, and to protect employees' participation and appeal rights;
- Anti-discrimination, anti-harassment and anti-abuse

 - No discrimination, rejection or unfair treatment will be given to employees in terms of recruitment, training, promotion, salary and benefits, working conditions, organization and participation in trade unions, retirement and dismissal due to gender, age, religion, race, origin, social background, disability, nationality, marital status, illness, etc.;
 - All forms of harassment and violation of the human rights of others are strictly prohibited, including sexual coercion, threats, insults, and other related words, gestures, and physical contact;
- Forced labor is prohibited

 - Promote the joint supervision and implementation of all employees, and formulate a series of preventive measures, such as strict and comprehensive review and filing during the process of entering employee identity information, and fundamentally eliminate the use of child labor, forced labor and other illegal employment practices;

The Company ensures dignity and respect for all employees, and will not tolerate corporal punishment, mental or physical coercion, or verbal abuse against employees, nor allow employees to be treated in a brutal or inhumane manner.

Cases for protecting women's rights and interests

"Exclusive dining area for pregnant women"

In 2024, Meihua Group renovated its cafeteria to create a dedicated dining area for pregnant female employees, equipped with cushions and other items to provide comprehensive care for every expectant mother.



Mommy' s Cabin

In 2024, the Company renovated its offices and established more Mommy' s cabins for female employees' breastfeeding. The cabins were relocated for better privacy and convenience, and new furniture and appliances were provided to meet the needs of lactating female employees and ensures inclusiveness and dignity for every working mother at the Company.

Compensation and Performance

In line with the business philosophy of "full-staff operation, creation and sharing" and the management principles of "Three Fair and One More" and "Three High and One Low", the Company increases its investment in labor costs each year, establishes and improves the salary-increase mechanism, and through standard salary adjustments, "Small Wins" salary adjustments, competency-based salary adjustments, project bonuses, bonus pool plans, and employee stock ownership plans, guides and motivates employees to create value and share results, promoting the dual enhancement of corporate performance and employee compensation. On this basis, from 2020 to 2024, the Company allocated over RMB 100 million for employee salary increases, achieving the important strategic goal of doubling the income of frontline employees, with a total salary package increase of 10% for all employees.

- Bonus pool plan

In 2024, based on the existing bonus pool incentive policy, the Company continued to update and improve the bonus pool incentive plan, incorporating bonus pool targets into departmental business objectives, and all departments were encouraged to declare targets and assume more targets, aiming to "create more, share more."
- Equity incentives

In order to attract and retain outstanding talents, maintain an efficient management team, and fully motivate team members, the Company provides equity incentives to its directors, senior executives, core management personnel, and key technical staff based on their job performance and associated risks, aiming to allocate equity to core personnel and stimulate employees' sense of ownership.

Employee Benefits

The Company offers a variety of benefit measures to attract and retain excellent employees.

Benefit Category		Benefit Content
Basic benefits		According to the national regulations, the Company pays pension insurance, employment insurance, work injury insurance, medical and childbirth insurance, and housing funds for employees; and provides legal holidays (including marriage leave, funeral leave, prenatal check-up leave, maternity leave, sick leave, annual leave, parental leave, etc.).
Special benefits	Cash benefits	The Company provides employees with meal allowances, accommodation allowances, and transportation allowances every month, which will be deposited in cash into employees' salary cards or employee cards. Depending on regional differences, each person can enjoy an allowance of approximately RMB 10,000 per year.
	Housing subsidies	The Company provides home purchase subsidies for cadres and employees. As of the end of the reporting period, a total of RMB 79.2 million of home purchase subsidies has been distributed, benefiting 625 employees.
	Environmental improvement	In 2024, the Company invested a total of RMB 43.9 million to improve the office environment and facilities, including repairs and upgrades to restrooms, changing rooms, factory roads, and landscaping facilities, enhancing employee comfort at work. The Company has compiled a Corporate Civilization Construction Manual to promote further optimization of the work environment through a corporate civilization construction standard management system.
	Employee holiday benefits	On the eve of traditional festivals such as the Mid-Autumn Festival and the Spring Festival, the Company will prepare holiday gifts for employees.

In addition, the Company provides all employees with free access to clean toilet facilities, drinking water, suitable dining options (employee cafeteria), and rest areas, as well as refrigerators for food storage. The Company ensures that the dormitory facilities provided to employees are clean, safe, and meet their basic needs.

· Caring for Employees' Lives

According to the relevant internal regulations of trade union, the Company actively listens to employees' demands, plans a variety of cultural activities to meet the diverse needs of employees, and organizes employee events irregularly to help employees better integrate into the collective, enrich employees' leisure lives, continuously enhance employees' sense of belonging and happiness, and inject new vitality into the Company's cultural construction.

Women's Day activities >>>>

On the day of the festival, the Company will give out small gifts such as roses or carnations to female employees, and the administration will take the lead in organizing health lectures for female employees, fun sports games and other activities.

Employee cultural and sports league >>>>

In order to create Meihua Group characteristic activities and enrich the cultural life of employees, the Company organized the May Cultural Festival and the first Employee Cultural and Sports League in May 2024. Everyone performed well in basketball games, skill competitions, and knowledge quizzes. The teams competed on the same stage and fought hard, staging a high-level and high-standard cultural and sports event.

Double Seventh Festival >>>>

Before the Double Seventh Festival, the Company uses the Feishu platform to organize online independent dating activities, where could upload their friends and families' information to the platform to help single employees find their Mr./Ms. Right. Meanwhile, the Company plans offline activities to create opportunities for employees to communicate face to face, help employees successfully find partners offline, so as to further enhance their sense of happiness.

Interesting cultural activities >>>>

In November 2024, in order to enrich the cultural life of employees, enhance their cohesion, and help the whole Company to work hard in the fourth quarter to sprint for the annual goal, the Company organized interesting cultural activities for the fourth quarter. By planning novel activities such as "receiving challenging cards" and "collecting letters for challenging," it successfully attracted a large number of employees to participate.



· Employee Satisfaction Survey

In 2024, we launched an employee satisfaction survey through a questionnaire to gather genuine feedback from employees, understand their concerns, identify and improve shortcomings in work, and continuously enhance the Company's human resource management level.

In 2024, the overall satisfaction score of Meihua Group's employees was 3.91 (full score is 5 points), with a survey coverage rate of 88%.

· Focusing on Talent Growth and Diversified Employee Training Supports

Meihua Group has developed a variety of training programs to meet the needs of employees at different levels.

Training for college students

Meihua Group provides the "Dream Sailing" orientation training program for newly recruited college graduates, including cultural courses, military training, physical training, and other training activities. In 2024, the Dream Sailing training class sent 454 qualified college graduates to the Company.

Manager's Class training

In 2024, Meihua Group led 30 trainees of the managers and department heads training class to visit Shandong Wanhua, Shenyang Machine Tool and North Heavy Industries learn excellent operational management models and experience. It adopted the strategy of "combining training and practice" and was committed to improving the ability of future/current managers to undertake the Company's strategic goals and lead the team to achieve efficient operation of the organization.

Director's Class training

The 2024 Director's Class training focused on improving the quality of training, while also improving the competence and performance of cadres after training, thereby reducing costs and increasing benefits. Optimizations were made in training content and methods. It aims to improve the management ability of trainees by enhancing the quality of training materials through iterative case studies, motivating excellent lecturers, and practical management experience, to identify more high-potential candidates, and thus effectively addressing the shortage of backup personnel such as product workshop directors and production section chiefs. A total of 83 trainees were trained.

Specialist's Class training

In 2024, the Company established a technical system personnel training system and opened technical training classes with the goal of cultivating knowledgeable, problem-solving and respected technical engineers. The technical training courses were designed and developed around the job responsibilities of engineers and specialists, covering all aspects of the content from job responsibilities to the ability to analyze and solve problems, professional knowledge points, etc. A practical mechanism for the mid-term and final exams was designed to ensure that specialists can apply what they have learned. Since the launch of the training programs, the Company has conducted 10 training sessions, training 240 people, which has steadily improved the overall capabilities of the technical team.



Meihua
Group's
Training
Performance
for 2024

Total training time of employees	2,895,036 hours	
Average training hours per employee	225.15 hours	Training ratio of all employees 97.73%
Training ratio of male employees	98.72%	Training ratio of female employees 99.08%
Training ratio of primary-level employees	98.38%	Training ratio of middle management 93.05%
Training ratio of middle-senior management	100%	Training ratio of senior management 100%
Proportion of employees participating in GMP training	30.34%	

Key Indicators

Employment Situation Of The Company



Work Safety

Meihua Group always adheres to the bottom line thinking and the consciousness of red line, deeply implements HSE compliance requirements, continuously improves the level of intrinsic safety, promotes the solidification and deepening of safety culture, and ensures the occupational health and safety of employees.

Governance

Meihua Group strictly abides by the Work Safety Law of the People's Republic of China, the Law of the People's Republic of China on Prevention and Control of Occupational Diseases, the Provisions on the Safety Training of Production and Operation Entities, and the Guideline of China Occupational Safety and Health Management System. According to the requirements of work safety standardization, ISO 45001 and ISO 14001 management systems, the Company has formulated management systems such as Management Measures for HSE System Construction and Document Control and Emergency Plan for HSE Accidents, and establishes a unique HSE 12-element management system, which provides solid institutional guarantee for systematic HSE management.

With risk management as the core, we continue to promote systematic and distinctive full-member HSE management. In order to improve the efficiency of HSE management, and realize the effective implementation of work safety work, with the Safety Production Committee as the highest decision-making body, and with the General Manager as the first person responsible for work safety, the members of the leadership and the heads of relevant departments formed a Committee Group with clear hierarchy and defined responsibilities, ensuring the achievement of HSE management goals.

Leadership level

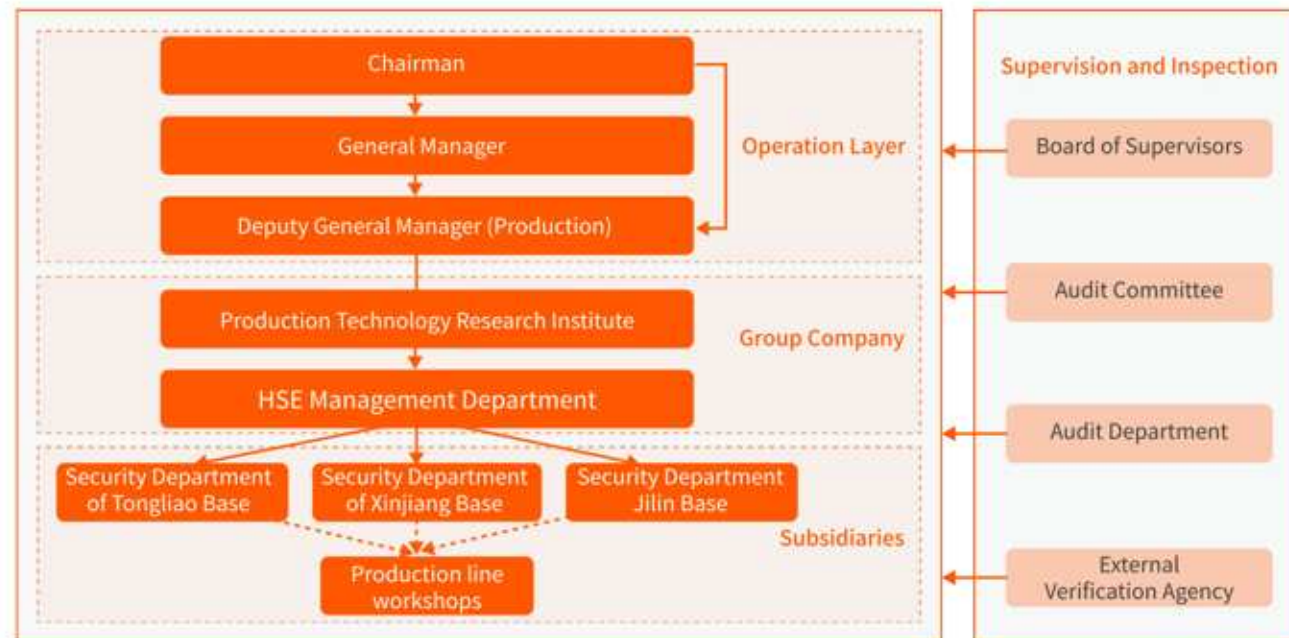
The Safety Production Committee is the highest decision-making body for HSE work. The General Manager is the director of the Safety Production Committee and the first person responsible for the work safety work; the Safety Production Committee implements a system of primary leadership responsibility, fully leading the work safety work.

Executive level

The Group's HSE Management Department consists of a safety inspection team, a rectification team, a technical team, etc., to carry out all management work in conjunction with the Base Safety Office.

Supervisory layer

The audit team is responsible for supervision and review to ensure the implementation of work safety work.



In 2024, the safety management system certification ratio of the three production bases of the Company reached **100%**. Among them, the Jilin Base continuously met the secondary work safety standards, while the Tongliao Base passed the tertiary work safety standardization audit and obtained certification.

Strategy

Meihua Group fully considers the importance of occupational health and safety to the enterprise. By identifying potential risks and opportunities in the production process and analyzing their possible financial impacts, it formulates scientific response strategies to ensure the occupational health and safety of employees and achieve the Company's sound development.

Risks/Opportunities	Risks			Opportunities	
Type	Chemical Exposure Risks	Operational risks of production equipment	High-temperature and high-pressure work environment risks	Technical opportunities	Improvement of working environment by new energy project
Description of Risks/Opportunities	The use of chemicals such as alcohol and detergents during the production process, as well as bio-aerosols that may be generated from microbial fermentation, can pose risks to employees' respiratory systems and skin.	Improper operation of large equipment such as fermentation tanks and centrifuges may lead to mechanical injuries or accidents.	Fermentation processes need to operate under high-temperature and high-pressure conditions, posing potential dangers such as burns and explosions.	Xanthan Gum green manufacturing technology reduces the use of harmful chemicals while simultaneously lowering occupational exposure risks.	The Tongliao 11MW rooftop photovoltaic project may reduce dependence on traditional energy, and thus lowering dust and noise pollution caused by coal-fired power generation
Financial Impact	Cost increase	Cost increase	Cost increase	Cost decrease, Revenue increase	Cost decrease
Impact Period	Short to medium-term	Short-term	Short to medium-term	Medium to long-term	Long-term
Degree of Impact	High	High	High	Medium	High
Likelihood of Occurrence	Low	Low	Low	High	Medium
Value Chain Segment Affected	Operations	Operations	Operations	Operations	Operations
Countermeasures	Process optimization: by using green intelligent manufacturing technologies (such as the optimization of Xanthan Gum production processes), reduce alcohol consumption by 33% and detergent usage by 50%, thereby lowering exposure risks.	Automation transformation: promote the intelligent upgrade of production lines (e.g., synthetic biology technology platform) to reduce manual operation steps.	Real-time monitoring system: install temperature and pressure sensors and automatic alarm devices to ensure immediate response to abnormal situations.	Technical promotion: expand this technology to other production lines (such as lysine and threonine production) and apply for industry standard certification.	Clean energy coverage: gradually apply PV power generation to other production bases to improve workshop ventilation and lighting conditions.

Note: we define short-term, medium-term and long-term impact cycles as 1-3 years, 3-5 years, and more than 5 years, respectively; large, medium and low impact levels as serious, moderate and slight impacts on the Company's production and operations, respectively; and high, medium and low likelihoods of occurrence as very likely to occur, more likely to occur, and less likely to occur, respectively.

Management of Impacts, Risks, and Opportunities

Meihua Group fully implements the Law of the People's Republic of China on Prevention and Control of Occupational Diseases and the Work Safety Law of the People's Republic of China and other relevant laws and regulations to conduct risk assessments on the Company's occupational health and work safety processes, ensuring that risks are controlled within a bearable range that is compatible with overall objectives, and safeguarding the Company's sustainable development.



Indicators and Targets



Safety production indicators		Unit	2024
Employees	Number of safety training sessions	Session	104
	Number of participants in safety training	Participant	61,049
	Total safety training duration	Hour	4,395,528
	Average safety training duration	Hour	341.85
	Safety training coverage rate	Percentage	100%
Contractor	Number of safety training sessions	Session	54
	Number of participants in safety production training	Participant	10,404
	Total safety training duration	Hour	749,088
Safety management system certification ratio		Percentage	100%
Frequency of work-related injuries among employees		Every 1,000,000 working hours	2.169
Frequency of work-related injuries among contractor's employees		Every 1,000,000 working hours	0.77
Total recordable injury frequency rate (TFIFR)		Every 1,000,000 working hours	0.581



Occupational Health and Work Safety management Measures

• Safety Production Standardization

The Company promotes the establishment of a safety benchmark management model by focusing on four workshops: threonine, lysine, starch, and fertilizers, driving the safety production standardization.

• Online Monitoring and Early Warning Management System

The Company's HSE Management Department has established safety inspection teams, rectification teams, and technical teams to regularly conduct safety inspections and technical assessments at each production base. We have also set up an online monitoring and early warning management system for HSE information at both the Group and subsidiary levels to monitor key control points for safety and environmental protection in real time and set up alarm notifications.

• Emergency Management of Production Safety

To effectively prevent and respond to HSE accidents, the Company has developed an Emergency Plan for HSE Accidents based on relevant regulations and standards, combined with its actual situation.

In response to major fire accidents in previous years, the Company adopted a surprise drill mode of "direct entry to the scene without notification," quickly initiating fire emergency drills using fire alarm equipment, smoke bombs, and other facilities. During the drill, a highly realistic fire scenario is simulated to comprehensively test the first response capabilities of the production line and workshop in the event of a fire accident, effectively conducting practical fire rescue drills.

After the drill, the Company will organize professionals to review the process, immediately start the revision of the emergency plan to address issues exposed during the actual drill, further clarify the responsibilities of various levels of organizations and personnel, standardize the emergency response procedures, optimize the process handling measures, and reinforce key points for on-site rescue. Through repeated drills, the Company continuously enhances its on-site emergency disposal capabilities, ensuring that in the event of a sudden fire accident, rescue actions can be carried out quickly, efficiently, and scientifically, minimizing losses and harm.



• Safety Production Training

Adhering to the ideology of "Safety First, Prevention Foremost," the Company comprehensively promotes the improvement and deepening of the work safety management system, and has formulated the HSE Work Safety Education and Training Management Regulations (Trial), systematically and purposefully carrying out work safety publicity and education work in conjunction with the annual safety training plan. The Company designates every Thursday as "Weekly Safety Working Day" to conduct presentations and safety activities and promote the construction of safety culture.

The Company insists on including contractors in a unified safety management system, designates professional safety management personnel to provide specialized training, while also requires contractors to organize their own internal safety training, so as to ensure that all projects and participants within the Company strictly adhere to the Company's work safety standards, effectively achieve work safety goals and build a solid safety line for the Company's stable development.

Case: Safety Knowledge PK Activity

During Safety Month, the Company organizes employees for a safety knowledge quiz by using questions from the national safety management personnel qualification examination database, and requires all production line managers and workshop directors to participate, so as to reinforce safety knowledge and enhance safety awareness through competition.



· Occupational Health Management

The Company continuously improves its occupational health and safety management system, with safety departments at each production base establishing occupational health engineers responsible for occupational health prevention work, strengthening occupational health supervision, and eliminating potential occupational health risks.

Occupational health management measures

Occupational health Archives management

Establish "Three Simultaneities" occupational health archives (covering simultaneous design, construction, and commissioning of facilities), occupational health management archives, occupational health publicity and training archives, occupational disease hazard factor monitoring and evaluation archives, employer occupational health monitoring management archives, and individual worker occupational health monitoring archives for relevant construction projects, effectively implementing occupational health supervision through standardized documents;

Occupational health Testing and rectification

Testing arrangements:

1. Invite a third party to conduct occupational health impact factor testing for each production line annually;
2. Evaluate the current situation of occupational disease hazards for each production line every three years;
3. Conduct regular testing for noise, dust, ammonia, and other factors in the workshop every month;

Rectification measures:

1. Comprehensively sort out occupational disease hazard factors, and identify key personnel and areas of concern;
2. Carry out special rectification work focusing on key factors such as dust and noise, continuously monitor the rectification and implementation of weak links, and strengthen source governance;

Emergency and warning management

Emergency management:

establish a record of toxic and hazardous gas monitoring and alarm devices and an emergency plan for acute occupational hazards, and develop a corresponding list of emergency supplies, equipment and facilities;

Warning management:

establish occupational health notice boards and occupational disease hazard notification cards at the production site, establish warning sign records, toxic material workplaces and highly toxic material operation lists;

Labor protection Supplies management

System construction:

establish a complete Labor Protection Supplies Management System to provide employees with labor protection supplies in the workplace;

Implementation:

ensure that each production line distributes labor protection supplies on time and keeps records of distribution; the labor protection supplies were 100% fully equipped and correctly used.

Occupational health training

Occupational health management personnel:

participate in the occupational health knowledge training organized by the District Health Commission every year;

All production line personnel:

receive occupational health knowledge training once a quarter;

All employees:

organize various activities and training to continuously improve employees' safety awareness and skills.

Employee physical examination

Regular physical examinations:

regularly organize health examinations and special occupational health examinations for all employees;

Occupational health monitoring:

establish occupational health monitoring archives for employees with higher risk of exposure to occupational hazards.

In 2024, the Company organized a publicity week for the occupational disease prevention and control law, conducted special training on occupational health, and carried out more than 50 occupational health training sessions, training a total of 61,049 participants, with a cumulative training duration of 122,098 hours.

· Occupational Disease Monitoring

The Company strictly complies with occupational health and safety regulations to ensure employees' occupational safety through a comprehensive management system and monitoring framework.

In order to keep the risk of occupational diseases at a low level, the Company conducts regular assessments and evaluations of occupational disease hazard factors every year, using scientific and advanced methods for risk assessment.

· Labor Protection and Physical Examinations for Employees

The company has established the Labor Protection Supplies Management System to provide employees with labor protection supplies in the workplace, ensuring their health and safety at work, and the labor protection supplies were 100% fully equipped and correctly used.

Meanwhile, the Company regularly organizes health examinations for all employees and specialized occupational health examinations, and establishes occupational health monitoring archives for employees exposed to higher risks of occupational hazard factors, comprehensively safeguarding employee occupational health and safety. In 2024, the Company achieved 100% coverage of employees' entry physical examinations, with 6,066 people completing the occupational health examination in the process, and a periodic on-the-job health physical examination rate of 47%, ensuring that all required examinations are conducted efficiently to prevent occupational diseases and related illnesses.



Rural Revitalization and Social Contribution

The Company continues to focus on and invest in key social areas such as rural revitalization, education, and healthcare, create key brand projects that align with the core values of the Company, actively fulfil corporate social responsibility, and promote the common development of the enterprise and society.



Rural Revitalization

Industrial Cooperation

As an important part of the agricultural industrial chain, Meihua Group uses corn as raw material for biological fermentation, promoting the integration of agriculture with manufacturing and logistics industries through large-scale procurement of corn and other agricultural products, creating direct and indirect employment opportunities through the agricultural industrial chain, and facilitating agricultural upgrades and increasing farmers' income through its production and operational activities.

Public Welfare Assistance

Relying on the public welfare foundation, the Company actively carries out public welfare projects such as agricultural support and public welfare assistance in cooperation with local governments, schools and communities in places such as Xizang, where the Company is registered, so as to enhance the intrinsic power of rural development and promote rural revitalization.

As of the end of the reporting period, the Company's investment in rural revitalization amounted to RMB 224,000, benefiting a total of 2,765 people.

The Company donated RMB 50,000 to Naga Village in Xizang for the renovation of the villagers' activity center, enriching the cultural life of the villagers, enhancing community cohesion, and promoting harmonious community development;

Donated 130 tons of fertilizer (equivalent to RMB 104,000) to impoverished households in Tongliao City, as a practical action to support local agricultural development and help farmers increase their income. This has promoted the sustainable development of the local agricultural industry and provided a solid foundation for the cultivation of rural characteristic industries.

Participating in rural revitalization work is not only a practice of social responsibility but also a reflection of the Company's values. The Company will continue to uphold the concept of "taking from society and giving back to society", actively respond to the national rural revitalization strategy, deepen collaborative development with agriculture and rural areas, explore more diversified and sustainable assistance models, and contribute to achieving common prosperity.

Social Contribution

The Company attaches great importance to community participation and public welfare charity, considering it an important part of fulfilling social responsibility. To standardize the Company's donation and sponsorship activities and ensure the effectiveness and sustainability of public welfare activities, the Company has formulated the External Donation Management System of Meihua Group and continuously improves the relevant institutional framework.

The Company strongly supports the development of education by participating in educational support activities such as assisting impoverished students, youth development, basic education, reading education, and higher education in the form of public donations. In 2024, the total amount of charitable donations to the education sector reached RMB 181,975.

Education

Research-based learning: >>>>

The Company donated RMB 920,000 to support the Shanghai Chunhe Youth Development Center in carrying out research-based learning public projects in rural areas of Jilin Baicheng and Guizhou;

Supporting impoverished students: >>>>

In 2024, the Xizang Meihua Group Public Welfare Foundation participated in the Baicheng Hanhai Scholarship Action, donating a total of RMB 400,000 to 45 impoverished students in Baicheng; donated RMB 90,000 for educational assistance to 18 impoverished students in Duodi Township, Xizang;

School development support: >>>>

Donated RMB 75,000 to a primary school in Bange County, Xizang;

Caring for children's growth: >>>>

Donated RMB 150,000 to the Children's Welfare Institute of the Xizang Autonomous Region;

Promoting reading education: >>>>

Donated RMB 65,000 to a primary school in Xinjiang for the school's reading pavilion project;

Supporting higher education: >>>>

Donated RMB 50,000 to the School of Chemical Engineering and Technology of Tianjin University to support discipline construction and talent cultivation;

In addition, the Company also focuses on medical and health care, social culture, infrastructure construction, and economic development.

Other fields

Medical and health care: >>>>

Medical and health care: focus on the development of medical and health services in remote areas, donating RMB 75,000 to the Beila Town Health Center in Bange County, Xizang, to improve local medical service levels;

Cultural development: >>>>

Cultural development: donated RMB 200,000 to the Xizang Highland Culture Development Foundation to promote the development of Xizangan culture;

Infrastructure construction: >>>>

Donated RMB 100,000 for the infrastructure construction of the Baicheng Industrial Park to support local infrastructure development and economic growth;

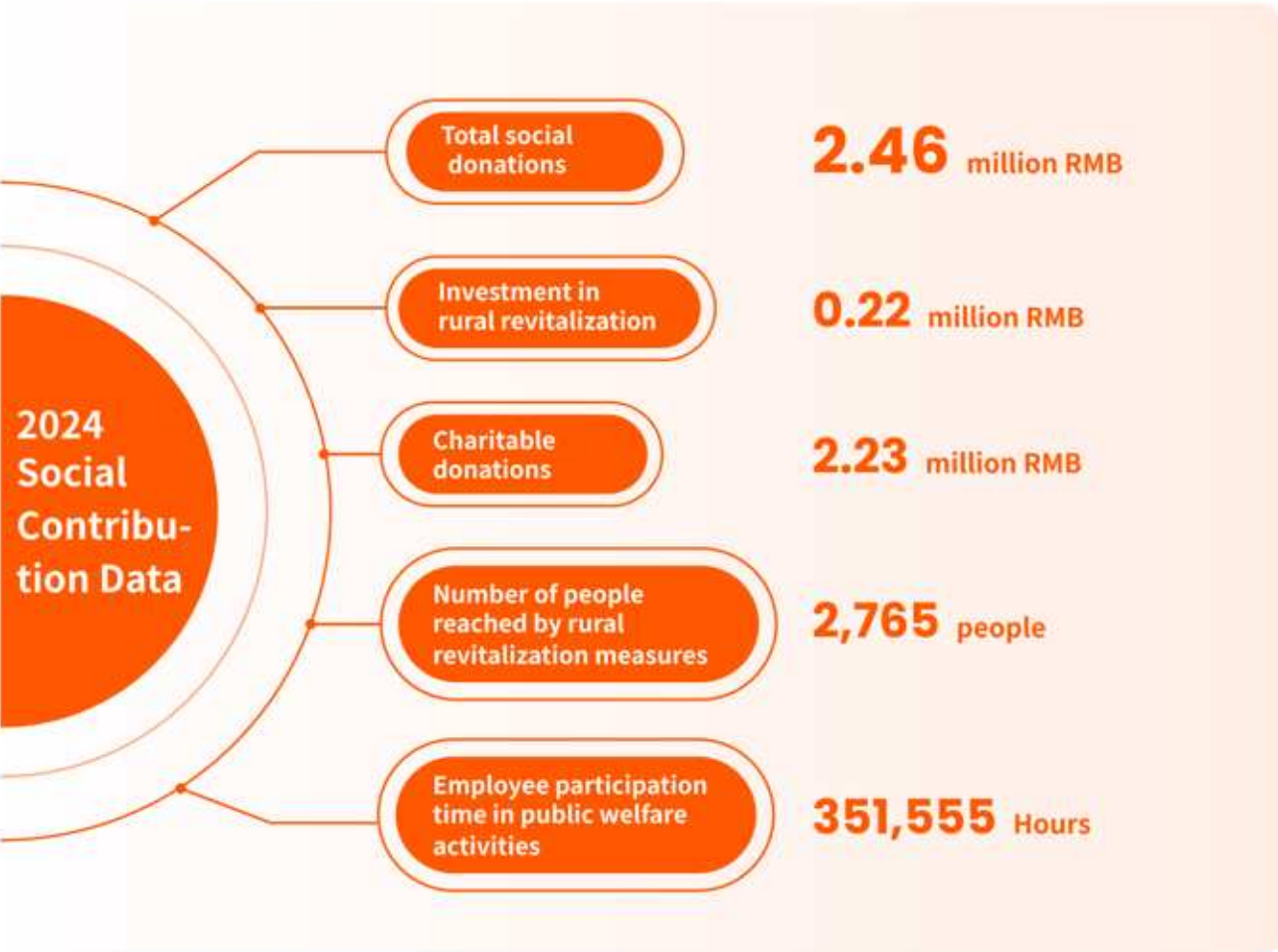
Agricultural industry development: >>>>

Donated RMB 30,000 to the Fourth Company of the Sixth Division of the Xinjiang Production and Construction Corps to support local agricultural production and community development;

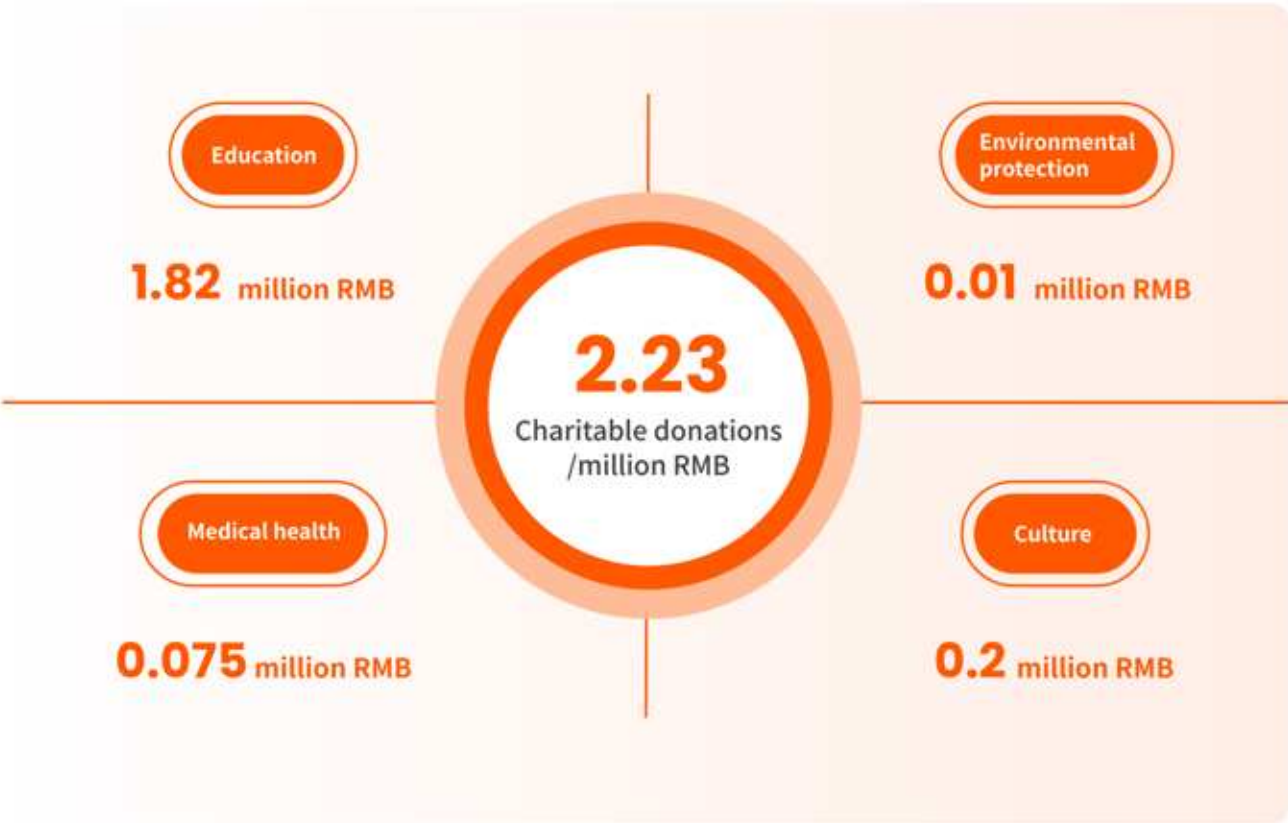
Social Contribution

To further deepen the dissemination of charitable concepts, the Company makes public welfare an important part of its corporate culture activities, and has planned and carried out various forms of employee volunteer activities to inspire employee participation enthusiasm, continuously expanding the boundaries of public welfare, and working together with employees and all sectors of society to create a better future.

- The Company organized an online step donation activity for employees across the Company, engaging over 4,000 employees to participate online, accumulating a total of 350,640 volunteer hours, and donated RMB 10,000 to the Tongxin Guangcai Foundation in Guizhou Province through the employee walking volunteer activity to help high school students in difficulty in Guizhou focus on their studies. Donated RMB 10,000 to the Shenzhen One Foundation to help children in Xinjiang stay warm during winter. Donated RMB 10,000 to the Shanghai Rende Foundation to provide books for children in Jilin Province. Donated RMB 10,050 to the Beijing Municipality Entrepreneurs Environmental Protection Foundation for planting saxaul trees in Alxa, Inner Mongolia, to help combat desertification.
- Carried out the Blue Envelope Communication Volunteer Activity, mobilizing the Company's volunteers to establish communication companionship with 110 students in Guizhou, providing psychological care and support, totaling RMB 39,700.



Charitable Donation Data (statistics by category) >>>>



05

Business Ethics and Anti-corruption



We always regard integrity as the Company's operating guidelines and take the core values of "Associating by honesty; improving by attitude; thriving by integrity; lasting by unity and harmony" as the outline. We integrate business ethics and anti-corruption efforts into key business processes such as procurement and sales. Through regular training, internal audit supervision, and the establishment of reporting channels, we manage business ethics and anti-corruption, ensuring the company operates in compliance and builds a solid foundation of trust.

Business ethics and anti-corruption management system	99
Business ethics and anti-corruption whistleblowing mechanism	100
Business ethics and anti-Corruption management measures	101
Key indicators	102
Supplier anti-corruption management	102



Business Ethics and Anti-corruption Management System

Meihua Group always adheres to the management policy of "acting in accordance with regulations, being honest and trustworthy, resisting corruption, and pursuing excellence." It strictly implements the Anti-corruption Management Measures of Meihua Holdings Group Co., Ltd. and the Anti-bribery Management Manual of Meihua Holdings Group Co., Ltd. Relying on a clear anti-corruption organizational structure, defined authority distribution, and systematic corruption prevention and control mechanisms, it strictly regulates the professional behavior of middle and senior management as well as ordinary employees, strives for creating a clean, honest, diligent, and dedicated atmosphere within the Company, and fundamentally eliminates behaviors that harm the legitimate interests of the Company and its shareholders.

The Company's business ethics and anti-corruption system covers the Company and its subsidiaries, with a coverage rate of 100%.

Anti-corruption organizational structure and responsibilities

Audit Committee

Regularly review the anti-bribery management system

General Manager

Conduct regular evaluations and reviews of the suitability and effectiveness of the anti-bribery management system and its objectives

Audit Department

Develop and implement the annual inspection plan, and report the compliance and risk assessment results of the anti-bribery management system to the General Manager

Business Department

Implement the requirements of the system and strictly adhere to management objectives.

During the reporting period, the Company passed the ISO37001 anti-bribery management system certification, and the anti-bribery management system certification coverage rate reached 100%.



Business Ethics and Anti-corruption Reporting Mechanism

The Company maintains a "zero tolerance" stance towards any form of bribery and corruption. The Company's Audit Department continues to implement the Reporting and Reporter Protection Management System of Meihua Holdings Group Co., Ltd., continuously standardizes the reporting management process, improves reporting channels, regulates the reporting investigation process, and enhances reporter protection measures, and starting from various aspects such as information reception, storage, and circulation, maintains the sources of reporting information strictly confidential, creating a safe and reliable reporting environment for reporters.

The company investigated and handled cases in 2024

30 items

Internal reports

2 items

Serious incidents



100%

Response rate for bribery whistleblowing

Reporting channels



Internal reporting:
Feishu Anonymous
Reporting Platform



Reporting Email:
mhshenji@meihuagrp.com

Business Ethics and Anti-corruption Management Measures

Specific content of measures	
<div><div>Regular financial audit>>>></div><div>Conduct independent financial audits regularly to effectively prevent bribery risks;</div></div>	<div><div>Due diligence>>>></div><div>As part of financial control for bribery risk assessment, conduct due diligence on specific transactions, activities, business partners, or the Company's employees;</div></div>
<div><div>Special audit>>>></div><div>Utilize internal control testing methods to conduct special internal control audits to identify deficiencies and loopholes in business management, promote the Company's stable operation, prevent violations and disciplinary risks, standardize employee behavior, and reduce compliance risks;</div></div>	<div><div>Integrity pre-control>>>></div><div>Assess and identify high-risk positions, and require new employees in key positions such as procurement, sales, human resources, and finance to sign integrity commitment letters for the purpose of pre-control;</div></div>
<div><div>Key management matters>>>></div><div>Focus on internal control compliance management in areas such as procurement, storage, sales, operations, quality, human resources, finance, and assets;</div></div>	<div><div>Bribery compliance inspection>>>></div><div>Implement the ISO 37001 anti-bribery management system standard, establish an internal audit team, and conduct anti-bribery internal control compliance inspections for the Company and its subsidiaries to prevent and respond to business ethics and bribery risks;</div></div>
<div><div>Risk prevention>>>></div><div>Use the identification, analysis and evaluation of bribery risks as a means of focusing on anti-bribery management and preventing bribery from occurring; Business ethics and anti-corruption risk assessments cover the Company and all subsidiaries, suppliers, and partners;</div></div>	<div><div>System publicity training>>>></div><div>Organize relevant business departments to conduct business ethics and anti-corruption training; In 2024, a total of 8 training sessions were conducted focusing on key positions such as procurement, sales and finance, with a training duration of over 244 hours and a total of 1,293 trainees, achieving full coverage of the Company's business operation chain.</div></div>

Key Indicators

<div>0</div> <div>Number of cases involving corruption concluded</div>	<div>0</div> <div>Number of litigation cases involving commercial ethics concluded</div>
<div>0</div> <div>Number of incidents of business ethics and anti-corruption reporting</div>	<div>30 items</div> <div>Intra-company reporting matters investigated and handled</div>
<div>2 items</div> <div>Intra-company serious reporting matters investigated and handled</div>	<div>244 hours</div> <div>Duration of business ethics and anti-corruption training for employees</div>

Supplier Anti-corruption management

Meihua Group continuously builds a compliance governance system for the entire procurement business chain to standardize the operational standards and responsibilities of procurement personnel internally, and clarify the integrity performance requirements for business partners externally, forming a dual-directional and multi-dimensional constraint mechanism. Relying on the company's internal management system to implement embedded supervision, it has established a standing audit mechanism to achieve dynamic identification and closed-loop governance of corruption risks through penetrating inspection of the procurement process, dynamic assessment of supplier admission and joint review of contract performance.

Appendix

| ESG data sheets

• Financial indicators

Indicator	Unit	2024
Operating income	RMB 100 million	250.69
Net profit attributable to the parent company	RMB 100 million	27.40
Total assets at end of period	RMB 100 million	238.10

• Governance indicators

Business ethics and anti-corruption management

Indicator	Unit	2024
ISO37001 Anti-Bribery Management System Certification Coverage	Percentage	100%
Number of incidents of business ethics and anti-corruption reporting	Case	0
Number of embezzlement litigation cases concluded	Case	0
Number of cases involving commercial ethics concluded	Case	0
Internal reporting matters investigated and handled	Item	30
Serious matters handled	Item	2
Total hours of business ethics and anti-corruption training for employees	Hours	244

• Environmental indicators

Environmental indicators	Specific indicators	Unit	2024
Climate change	Total GHG emissions	tCO ₂ e	9,030,482.02
	Scope 1	tCO ₂ e	8,692,810.04
	Scope 2	tCO ₂ e	337,671.98
	Emission intensity (calculated per RMB 1 million of operating income)	tCO ₂ e/RMB 100 million	360.22
Energy utilization	Total energy consumption	tce	3,677,671.00
	Direct energy	tce	3,540,405.97
	Coal	tce	3,533,179
	Gasoline	L	69,849
	Diesel	Ton	315
	Natural gas	m ³	7,662,165
	Indirect energy	tce	137,265.03
	Electricity	MWh	1,116,883.92
	Clean energy usage	KWh	304,874,044.71
	Energy use intensity (calculated per RMB 1 million of operating income)	GJ/RMB 1 million	4,293.92
Energy conservation and emission reduction	Total number of energy conservation and emission reduction training participants	Person	200
	Total hours of energy conservation and emission reduction training	Hour	800
	Coverage of supplier carbon reduction program	Percentage	42%

Environmental indicators	Specific indicators	Unit	2024
Environmental compliance management	Environmental management system certification ratio	Percentage	100%
	Environmental violations	Case	0
	Investment in environmental protection funds	RMB 10,000	6,851
Water resource utilization	Total water intake	Ton	35,361,776
	Total water consumption	Ton	54,980,998
	Water resource recycling amount	Ton	18,023,399
	Alternative water usage	Ton	2,000
	Proportion of water intake from high-risk areas	Percentage	100%
	Percentage of crops purchased from areas with high or extremely high baseline water pressure	Percentage	100%
	Water-related violation incidents	Case	0
Water pollutant emissions	Total volume of industrial wastewater	Ton	26,330,709
	Total volume of domestic wastewater	Ton	876,234
	Chemical oxygen demand (COD)	Ton	2,185.68
	Ammonia nitrogen (NH3-N)	Ton	263.27
	Total nitrogen (TN)	Ton	841.70
	Total Phosphorus (TP)	Ton	79.77
Atmospheric pollutant emissions	Total emission of air pollutants	Ton	3,728.57
	Emissions of particulate matter (PM)	Ton	434.6

Environmental indicators	Specific indicators	Unit	2024
Atmospheric pollutant emissions	Emissions of sulfur oxides (SOx)	Ton	1,434.85
	Emissions of nitrogen oxides (NOx)	Ton	1,860.63
	Emissions of volatile organic compounds (VOCs)	Ton	192.81
Waste	Total volume of waste generated	Ton	1,553,120.78
	Density of hazardous waste(calculated per RMB 1 million of operating income)	Ton/RMB 1 million	0.02
	Total volume of hazardous waste generated	Ton	467.71
	Volume of waste activated carbon generated	Ton	268.36
	Volume of waste vanadium pentoxide generated	Ton	0
	Volume of waste nickel-containing catalyst generated	Ton	42.5
	Volume of waste zinc oxide catalyst generated	Ton	37.72
	Volume of waste engine oil generated	Ton	100.91
	Volume of waste detection liquid generated	Ton	1.78
	Empty waste reagent bottles	Ton	0.84
	Volume of waste paint bucket generated	Ton	9.10
	Volume of waste toner cartridge generated	Qty	2,393
	Volume of waste ink cartridge generated	Qty	1,644
	Volume of waste battery generated	Qty	11,306
	Volume of waste electronic garbage generated	Ton	2.33

Environmental indicators	Specific indicators		Unit	2024
Waste	Density of non-hazardous waste (calculated per RMB 1 million of operating income)		Ton/RMB 1 million	61.93
	Total volume of non-hazardous waste generated		Ton	1,552,653.07
	Volume of industrial waste generated		Ton	871,655.58
	Volume of kitchen waste generated		Ton	545.16
	Volume of dust generated		Ton	678,346.34
	Volume of office waste generated		Ton	2,105.99
Packaging material utilization	Reduction in packaging material weight		Ton	120
	Recycling amount of packaging materials		Ton	1,098
	Weight of packaging materials	Primary plastic category	Ton	28,000
		Primary paper category	Ton	750
		Secondary wood category	Ton	3,600
		Secondary paper category	Ton	1,900

• Social indicators

Product and service safety and quality >>>>

Indicator	Unit	2024
Product quality certification coverage	Percentage	100%
Product testing pass rate	Percentage	100%
Testing pass rate of incoming products	Percentage	99.80%

Indicator	Unit	2024
Finished product qualification rate	Percentage	100%
Quantity of recalled products	Ton	354
Major liability incidents related to product and service safety and quality	Case	0
Coverage of quality training for employees	Percentage	100%
Total hours of product quality training for employees	Hour	47,295
Total number of employees participating in product quality training	Person	2373
Percentage of supplier product quality certification	Percentage	43%
Number of customer complaints	Case	89

Chemical safety >>>>

Indicator	Unit	2024
Proportion of chemicals identified/classified by the Company to all chemicals listed in the Hazardous Chemicals Information List (2023)	Percentage	2.2%
Disclosure scope of chemicals	Percentage	100%
Assessment scope of chemical hazards	Percentage	100%

R&D and innovation >>>>

Indicator	Unit	2024
Amount of R&D investment	RMB 100 million	7.33
Proportion of R&D investment to income from primary business	Percentage	2.93%
Number of R&D personnel	Person	402
Proportion of R&D personnel to the total number of employees of the Company	Percentage	3.13%
R&D personnel with a bachelor's degree or higher	Percentage	60.95%
Number of valid patents during the reporting period	Item	160
Invention patents	Item	109
Utility model patents	Item	49
Design patents	Item	2
Number of newly authorized patents in 2024	Item	39
Negative events in technology ethics	Item	0

Data security and customer privacy protection >>>>

Indicator	Unit	2024
Number of information security and privacy leakage incidents	Case	0

Supply chain management >>>>

Indicator	Unit	2024
Proportion of suppliers signing the Supplier Code of Conduct	Percentage	76%

Indicator	Unit	2024
Total number of Tier-1 suppliers	Qty	349
Key Tier-1 suppliers	Qty	86
Key non-Tier 1 suppliers	Qty	6
Number of suppliers with high ESG risk	Qty	1
Tier-1 suppliers	Qty	1
Increased proportion of suppliers with high ESG risk	Percentage	93%
Proportion of products with raw materials traceable to the place of origin	Percentage	100%
Proportion of cost of food raw materials that have obtained third-party certification	Percentage	98%

Employment situation of the Company >>>>

Indicator		Number of employees	Number of employees (proportion)
Total number of employees		12,858	100.00%
Number of employees by gender	Male employees	8,337	64.84%
	Female employees	4,521	35.16%
Number of employees by age	Below 20 years old	23	0.18%
	20-29 years old	3,605	28.04%
	30-39 years old	4,698	36.54
	40-49 years old	3,426	26.64%
	50-59 years old	1,099	8.55%

Indicator		Number of employees	Proportion
Number of employees by age	60 years old and above	7	0.05%
Number of employees by regions	Chinese mainland	12,852	99.95%
	Overseas regions	6	0.05%
Number of employees by ethnicity	Han	9,544	74.23%
	Mongolian	2,294	17.84%
	Manchu	685	5.33%
	Hui	179	1.39%
	Other ethnic groups	156	1.21%
Proportion of female senior executives		4	36%
Employees from vulnerable groups		87	0.68%

Human resources management performance >>>>

Indicator	2024
Return on investment in human capital	175%
Employee satisfaction	3.91 (full score is 5 points)
Employee satisfaction survey coverage	88%
Proportion of employees who signed collective agreements	100%
Proportion of employee subject to human rights assessments	90%
Coverage of pre-employment physical examination for employees	100%

Indicator	2024
Periodic on-the-job physical examination rate	47%

Employee training >>>>

Indicator	2024
Total training time of employees	2,895,036 hours
Average training hours per employee	225.15 hours
Training ratio of all employees	97.73%
Training ratio of male employees	98.72%
Training ratio of female employees	99.08%
Training ratio of primary-level employees	98.38%
Training ratio of middle management	93.05%
Training ratio of middle-senior management	100%
Training ratio of senior management	100%

Work safety >>>>

Indicator	Unit	2024
Safety management system certification ratio	Percentage	100%
Number of employees participating in work safety training	Participant	61,049
Number of contractors participating in work safety training	Participant	10,404
Frequency of work-related injuries among employees	every 1,000,000 working hours	2.169

Indicator	Unit	2024
Frequency of work-related injuries among contractor's employees	every 1,000,000 working hours	0.77
Total recordable injury frequency rate (TFIFR) among employees	every 1,000,000 working hours	0.581

Social contribution >>>>

Contribution Indicators	Sub-item indicators	Unit	2024
Social contribution	Total amount of social donations	RMB 10,000	245.875
	Investment in rural revitalization	RMB 10,000	22.4
	Charitable donation amount	RMB 10,000	223.475
	Number of people reached by rural revitalization measures	Person	2,765
	Hours of participation in employee volunteer activities	Hour	351,555
	Number of employees participating in volunteer activities	Participant	4444
	Average participation duration of employee participating in volunteer activities	Hours/participant	79.11
Charitable donations (statistics by category)	Charitable donations	RMB 10,000	223.475
	Education	RMB 10,000	181.975
	Environmental protection	RMB 10,000	1
	Healthcare	RMB 10,000	7.5
	Culture	RMB 10,000	50

Benchmark Index Table

Dimension	S/N	Guideline Topic	Corresponding Guideline Article	Corresponding Title	Page Number
Environment	1	Addressing Climate Change	Articles 21 to 28	Combating climate change	49-56
	2	Pollutant Discharge	Article 30	Exhaust gas management	63-64
	3	Waste Treatment	Article 31	Waste Management	65
	4	Ecosystem and Biodiversity Conservation	Article 32	Biodiversity Conservation	66
	5	Environmental Compliance Management	Article 33	Environmental Compliance Management	57-61
	6	Energy Utilization	Article 35	Combating climate change	53-56
	7	Water Resource Utilization	Article 36	Water resource utilization and water-saving measures	62-63
	8	Circular Economy	Article 37	Water-saving measures; green packaging materials	63、 66
Society	9	Rural Revitalization	Article 39	Rural Revitalization	93
	10	Social Contribution	Article 40	Social Contribution	94-96
	11	Innovation-driven	Article 42	Innovation-driven and scientific and technological	39-46
	12	Technology Ethics	Article 43	Science and Technology Ethics	46
	13	Supply Chain Security	Article 45	Supply Chain Security	69-73
	14	Equal Treatment of Small and Medium-sized Enterprises	Article 46	Treat small and medium-sized enterprises equally	73
	15	Product and Service Safety and Quality	Article 47	Product and Service Safety and Quality	27-36
	16	Data Security and Customer Privacy Protection	Article 48	Data security and customer privacy protection	38
	17	Employees	Article 50	Human Resources Management	74-84
Governance	18	Due Diligence	Article 52	/	/
	19	Communication with Stakeholders	Article 53	Stakeholder Communication	21
	20	Anti-commercial Bribery and Anti-corruption	Article 55	Business Ethics and Anti-Corruption	97-102
	21	Anti-unfair Competition	Article 56	/	/