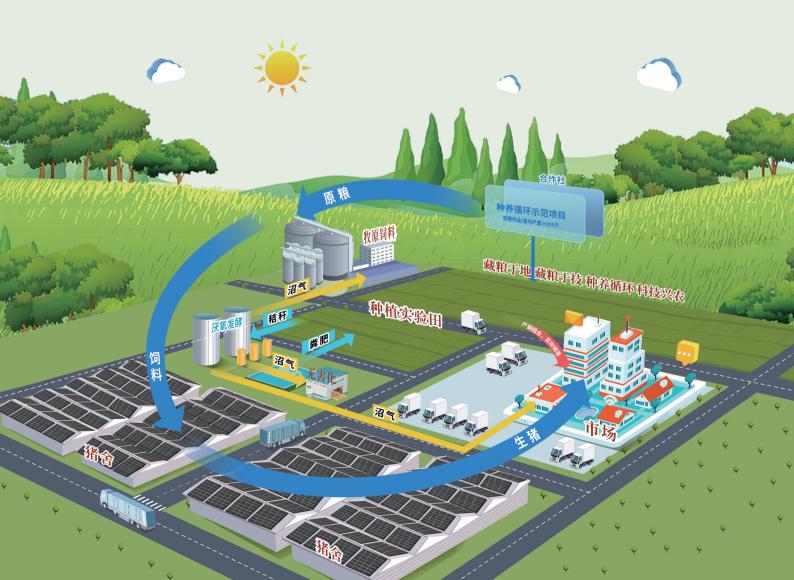


Muyuan Foods Co., Ltd.

2022 Environmental, Social, & Governance Report



About the Report

Muyuan Foods Co., Ltd. (hereinafter referred to as "Muyuan", "Muyuan Foods", "the Company" or "we") hereby issues the 2022 Environmental, Social, and Governance (ESG) Report to communicate to all stake-holders information concerning Muyuan's policies, measures, actions and achievements in sustainable development.

Scope and Frequency

Unless during the Rer

Unless otherwise specified, the Report covers Muyuan Foods Co., Ltd. and its subsidiaries during the period from January 1, 2022 to December 31, 2022. Description in some parts of the Report goes beyond the above period. The Report is issued annually.

Reference



The Report is prepared to meet applicable standards for disclosing sustainable development information, with consideration to the industry background and features of the Company. The compiling of the Report is with reference to Chinese and foreign CSR reporting standards and guidelines, including the *Sustainability Reporting Standards of the Global Reporting Initiative (GRI Standards 2021)* issued by the Global Sustainability Standards Board (GSSB), the *Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR 5.0)* issued by Chinese Academy of Social Sciences (CASS), and the *ISO 26000: Guidance on Social Responsibility* issued by the International Organization for Standardization (ISO).

Availability



The Report are available in both print and electronic form. The electronic form could be read and downloaded on CNINFO (www.cninfo.com.cn), a website accredited by China Securities Regulatory Commission ("CSRC") for information disclosure of listed companies, and the Company's website (www.muyuanfoods.com).



Notes to the Report's Data

The Report's data is all extracted from internally collected data, public documents, sustainable development cases reported by subsidiaries and qualitative and quantitative questionnaires prepared for reporting.

Currency



Unless otherwise specified, all monetar minbi ("RMB").

Unless otherwise specified, all monetary amounts quoted in the Report are presented in Ren-



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Message from the Chairman



2022 was a year full of challenges and opportunities for all Muyuan people. Geopolitical conflicts intensified, and the game of great powers had a profound impact on the global economy. Extreme weather in various places made people more aware of the necessity and urgency of climate action. Periodic fluctuations in hog production capacity led to volatility in hog prices, affecting the profitability of all companies in the industry. Against such background, Muyuan people firmly practiced the corporate core value of "creating value and serving the society", focused on technical issues, achieved breakthroughs at the front line of the business, continued to promote organizational upgrading, and improved the company governance system. With further improved operational achievements, the ESG work has also stepped into a new level.

Responsible production so that people can eat safe pork and enjoy a rich life has been the founding aspiration and mission of Muyuan ESG. For Muyuan, ESG is a powerful means to combat internal and external risks. As a pork product company, there are multiple risks: the nature of the farming industry means that we are in direct contact with natural resources and the environment such as land, air, and water every day; and the fact that we have business across the nation means that we must handle the relationship with local communities well. These are the internal driving forces for us to excel in ESG and promote the high-quality development of the Company.

Climate change and the carbon peaking and carbon neutrality goals have promoted the vigorous development of green agriculture, and addressing climate change has become a common goal of all countries and has been put into action. In this context, the demand for green pork products will continue to grow. We have been actively promoting clean production and reducing energy consumption. In 2022, Muyuan reduced greenhouse gas emissions through various key emission reduction technologies by 4,088,800 tonnes, equivalent to the carbon dioxide absorbed by 1.67 million mu (111,333 hm²) of forest in a year. Producing healthy food for the society in a responsible manner, improving the quality of life of the public, and contributing to the global response to climate change are the external driving forces for our high-quality development. In 2022, the Company's ESG construction added a highlight to our high-quality development. In terms of governance, the Board of Directors established the Sustainability Development Committee. In terms of environment, we adhered to the green development path, promoted the Crop-Livestock Cycle, actively promoted green energy projects such as photovoltaic power generation and biogas utilization, and compiled and released the *Muyuan Green and Low-Carbon Action Report 2021*. In terms of employees, we enhanced personnel recruitment and staff training, established a fair and effective promotion and reward mechanism, shared the achievements of enterprise development with employees to promote common prosperity. In the community, we continued to implement active community policies, investing more than 16 billion yuan in promoting the development of industries in locations where we operate and improving the infrastructure and education.

After years of development, we are fully aware that ESG is the cornerstone of a company's survival and high-quality development, and it is a protective system in the face of shocks. Muyuan continues to enhance our foundation in technological innovation, product quality management, industrial ecology building, human resources, etc. In the past year, we have shown excellent resilience in the face of the industry cycle trough and extreme weather events. Thanks to our long-term and unremitting efforts, Muyuan's ESG performance has also been fully recognized by industry peers, the market, and investors. In July 2022, Shenzhen Securities Information Co., Ltd., a wholly-owned subsidiary of the Shenzhen Stock Exchange, launched the CNI ESG ratings, and Muyuan's ESG performance was rated as AA, which is at the forefront of the industry (agriculture, animal husbandry and fishery products). This is both an encouragement and a new starting point for us. Muyuan will continue to work hard to provide the public with safe, tasty, healthy and green pork food, and work with all parties to help the transformation and upgrading of the industry and promote the high-quality development of the pork industry.

Finally, I would like to express my heartfelt thanks to all employees for their hard work put in the sustainable development of the Company, and to the government and regulatory agencies, consumers, shareholders and investors, non-governmental organizations, community residents, media and other stakeholders for their support of the Company's ESG work. Also, we are grateful to the upstream and downstream partners for their trust in the Company, and we hope to continue to work together with you to create a better future.

Chairman: Qin Yinglin



Muyuan Culture

Muyuan leads and drives its development with its values. Embodied in the "Basic Law of Muyuan", Muyuan's corporate culture and value system take "creating value and serving society" as the core. This system has always been shaping all operation activities of the Company's business units and subsidiaries, and affecting how every Muyuan staff thinks, acts and feels from the inside out.

Basic Law of Muyuan

I. Business purpose:	Produce healthy foods for society to improve the life quality of the public, help- ing people enjoy an abundant life.
II. Core values:	Create value and serve society; be upright outside and inside, and advance social development. External value outweighs internal value; long-term interests outweigh immediate interests; the value of humans outweighs the value of things; common value outweighs individual value; social value outweighs profit value; and customer value outweighs production value.
III. Business selection:	Create substantial value instead of a bubble with our own strengths.
IV. Business principles:	Maximize social value. Never pass on costs, never shirk responsibilities, and nev- er leave hidden dangers. Take beneficial but not harmful or controversial actions. Persist and never waiver in value creation. Never expect fluky profits or yield to selfish interests.
	Object to commercial bribery and refuse unearned or illegal gains. Never engage in speculation, tricking, or dispossession. Never engage in underhand money deals. Be strict in self-discipline, be brave to shoulder responsibilities, and pursue perfection.
V. Employee benefits:	Bring benefits for employees. We regard employees as family members, help them grow and build a career platform for helping them achieve self-fulfilment. We are determined to bring happiness to each employee and each family. Every- one can enjoy a happy life here.
VI. Customer benefits:	Make cooperation conducive to customers' interests. Never impose whatever you dislike on others, but showing towards others what you yourself would like. Always feel for others and treat others with honesty and sincerity. We take customers as brothers and help each other to realize fairness, uprightness, openness, and transparency in business progress and make true simple, worry-free, efficient and win-win cooperation.
VII. Social responsibility:	Put knowledge into action to benefit society. Achieve the simultaneous improve- ment of economic benefits, ecological benefits, and social benefits. Promote an environment-friendly and animal-friendly business pattern. Promote circular economy and cleaner production to reduce negative influence on the atmosphere. Upgrade continuously the standards of food quality and actively build an indus- trial ecology to promote sustainable development. Keep carrying out public wel- fare undertakings to support education and promote social and economic devel- opment.
VIII. Constant development:	Adhere to the values and construct a platform for sharing; keep pace with the times and explore the unknown; face challenges with courage and go beyond selves; be selfless and build Muyuan a long-lasting company.

Tribute to Pigs

A pig lives an ordinary life.

It comes to the world quietly and leaves quietly.

Everything it had had already been given when we see it gone.

A pig lives a great life indeed!

The spirit of the pig mirrors that of the Muyuan people.

A pig lives a dedicated life.

It sacrifices its life for the happiness of human beings.

Pigs prove to us that is another life that sustains one life; one life is sacrificed whilst another is benefited.

Muyuan people shoulder the lofty mission of producing pork foods and creating a high-quality life for the public. Just like pigs, we are ready to give everything we have to make people's lives better.

A pig lives a happy life.

Despite the sacrifice of its precious life, a pig does not care much about how long it lives or how much it eats, but grows only big and strong, happily and quickly.

Pigs prove to us that is the quality rather than the length of life that matters. We should exchange the length of life for the quality of life without regrets, just like pigs.

A pig lives a philosophic life.

Whilst people are still thinking about the meaning of life and won't let go of fame and fortune, pigs have given a simple and clear answer, using their lives: the true meaning of life does not consist in how much you take, but in how much you can give to society and your fellow human beings.

So we cease to merely stand back discussing the meaning of life. We are determined to create value, with a mind full of more dedication and less scheming, like pigs.

We are grateful to pigs.

We raise pigs, but actually, it is the pigs that feed us. To respect pigs is to respect ourselves and to praise pigs is to praise ourselves. Let all of us, like pigs, be simple and happy to give and to make true a high-quality life!



About Muyuan

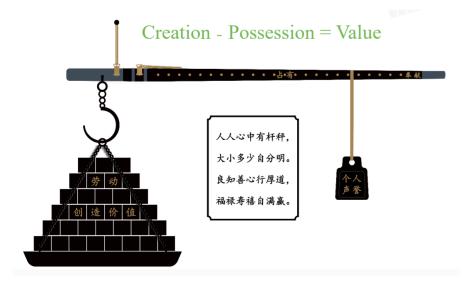
Company Profile

Founded in 1992 and having developed for 30 years, Muyuan Foods Co., Ltd. has formed a pork industry chain integrating feed processing, pig breeding, commercial pig farming, slaughter and processing. Muyuan attaches great importance to innovative research and development and dedicates IT and intelligent development teams to intelligent pig farming. By applying advanced technologies such as IoT, big data, and artificial intelligence, we have established a pig industry Internet platform covering feed processing, pig breeding, commercial pig farming, slaughter and processing to serve the upstream and downstream of the industry and to promote the upgrading of pork industry.

As of the end of 2022, Muyuan operates in 24 provinces (autonomous regions and municipalities) across China, with 288 wholly-owned and holding subsidiaries, 140,000 employees, and total assets of 192.9 billion yuan. In 2022, 61.2 million pigs were produced and 7.36 million were slaughtered. Muyuan has always been adhering to the good vision of "serving people with safe pork", and is committed to producing safe, delicious and healthy high-quality pork so that people can enjoy a richer life.

Who We Are	Producer of high-quality pork; Promoter of social progress.
Our Mission	Producing safe and healthy pork products for the public; Promoting healthy industry development.
Our Vision	Serving people with safe pork to help them enjoy a richer life; Becoming a respect- able company.

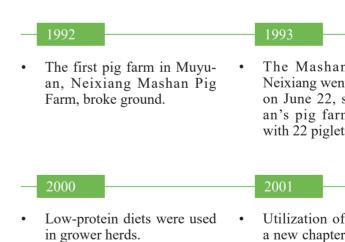
Muyuan Value Formula



Business Performance

	Unit	2022	2021	2020
Market pigs produced	1,000 heads	61,201	40,263	18,115
Slaughter	1,000 heads	7,362	2,899	239
Operating revenue	1 million yuan	124,826	78,890	56,277
Net profit	1 million yuan	14,933	7,639	30,375
Total assets	1 million yuan	192,948	177,266	122,627
Feed production capacity	1,000 tonnes	22,600	19,350	13,650
Number of em- ployees	Person	140,403	137,520	121,995

Development of Muyuan's ESG



a new chapter energy.

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n pig farm in nt into operation starting Muyu- ming business ets.	 Muyuan started exploring the pig waste dry cleaning technique to cut water use.
of biogas started er of using green	 The low-protein diet and net energy evaluation system were adopted throughout the farms. The "Ju'ai Education Assis- tance Project - Spring Rain Program" was launched to support the education in de- prived areas.

2004	2006	2007
 The Company started explor- ing farming waste water treat- ment solutions and developed the internal circulation (IC) anaerobic tanks. 	 Muyuan pig breeding system was completely established. The Company started explor- ing emission patterns to meet standards. 	 Farms started implementing clean production systems, and CDM project came into opera- tion.
 The circular economy pattern of "pig farming - biogas ma- nure - ecological agriculture" was explored. Muyuan CDM project passed the UN inspection and became China's first registered CDM project applied in pig farms. 	• Muyuan was awarded "Na- tional Nuclear Breeding Farm of Pigs" and "Standardization Demonstration Pig Farm".	• Muyuan initiated and estab- lished the Henan Association for Poverty Alleviation and Development.
— 2012	2013	2014
• Muyuan explored the manure mechanical dry cleaning process.	• The 17th farm in Neixiang was certified by CHINA G.A.P.	• Muyuan went public on the Shenzhen Stock Exchange with the stock code of 002714.
- 2015	2016	2017
 Muyuan's environmental pro- tection process was approved by the Ministry of Environ- mental Protection. 2018 	The "5+" poverty elimination pattern was launched in Neix- iang County, Henan province.	 Muyuan highly-reproductive breeding stocks were cultivat- ed, with several breeds form- ing a complete production network.
 The pig houses heating without fossil fuels were applied and promoted throughout the Company. The Company explored the improvement of saline-alkali land and planting of seawater rice. 	• The new pig house with air filtration was developed and applied to achieve fresh air filtration, independent ventilation and air deodorization and sterilization of outlet.	• The "5+" poverty elimination pattern helped 390 thousand people and 140 thousand households from 15 provinces and 62 counties out of pover- ty.
2021		2022
save water. • The Company donated 100 m	euse technology was promoted to nillion yuan for flood relief and hengzhou, Zhoukou, Xinxiang and reas.	 The Company issued the first <i>Green and Low-Carbon Action Report</i> in the industry. A Sustainability Development Committee was established in the Company.

the Company.

Awards and Recognition in 2022

Items	
Top 500 Chinese Enterprises	China Enterprise ciation
National Model Enterprise for Harmonious Labor Relations	Co-sponsored by Security, All-Ch prise Confederat All-China Federa
National Supply Chain Innova- tion and Application Demonstra- tion Enterprise	Ministry of Cor Technology, Min Agriculture and ministration for I Regulatory Com chasing, etc.
Top 500 Chinese Agricultural Enterprises	Farmers' Daily
2022 Excellent Cases of Social Responsibility of Chinese Pri- vate Enterprises	All China Federa
China Listed Companies ESG Top 100 Award	The 16th Value S ties Times
Excellent ESG Cases of Listed Companies	China Associatio

Issuing Institution

se Confederation, China Enterprise Directors Asso-

by the Ministry of Human Resources and Social China Federation of Trade Unions, China Enteration, China Enterprise Directors Association, and eration of Industry and Commerce

ommerce, Ministry of Industry and Information linistry of Ecology and Environment, Ministry of d Rural Affairs, People's Bank of China, State Adr Market Regulation, China Banking and Insurance mmission, China Federation of Logistics and Pur-

ration of Industry and Commerce

Selection of Chinese Listed Companies by Securi-

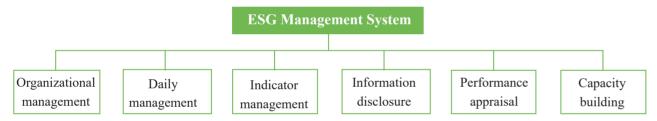
ion of Listed Companies

ESG Management

ESG Management Structure

We attach great importance to ESG work. We believe that the Company's highest decision-making body needs to make final decisions on the Company's ESG work policy and strategy. In 2022, Muyuan's Board of Directors established a Sustainable Development Committee to be fully responsible for the Company's ESG affairs and strategies to improve the Company's management towards sustainable development.

In order to ensure the smooth implementation of ESG work, Muyuan established a three-tier ESG management structure of "decision-making, organizational and operational levels", led by the Sustainable Development Committee of the Board of Directors. As a specialized team of the Board of Directors, this committee researches and gives suggestions on major decisions. The Sustainable Development Working Group, which is the organizational level, is responsible for studying the resolutions made by the Sustainable Development Committee of the Board of Directors, formulating relevant implementation plans, and organizing the implementation of the work. Each subsidiary and department serves as the ESG operational team and implements the Company's ESG resolutions according to the actual situation of each unit.



Sustainability Development Committee (Decision-making level)

ESG Office

(Organizational

level)

The Sustainable Development Committee conducts research and gives advice on major decisions related to the Company's sustainable development and ESG, and supervises the implementation and progress of the sustainable development strategies and plans, as well as its performance on key issues such as addressing climate change, safeguarding public health and safety and fulfilling social responsibility. The Committee also identifies sustainability risks related to the Company and assesses the impact on the Company of these relevant risks, and reviews the Company's annual ESG Report.

The ESG Office is set up under the Sustainability Committee of the Board of issues.

Subsidiaries and departments (Operational level)

Directors, responsible for undertaking specific matters related to sustainable development and the overall organization and management of all major ESG

The ESG directors of each subsidiary and each department promotes the implementation of specific ESG matters, implements the objectives of ESG issues set by the headquarters, implements ESG management-related work, and organizes communication with stakeholders.

Strategy of ESG Management

Muyuan's social responsibility strategy with the "Five Commitments"

Muyuan actively responds to the UN Sustainable Development Goals by establishing a corporate social responsibility strategy with the "Five Commitments" as the essence. Focusing on five areas, namely, food safety, environmental protection, win-win cooperation, employee care and public welfare, Muyuan has been contributing to the realization of SDGs by 2030.

Five Commitments Muyuan leads the development in the industry by sticking to scientific and techno-Food logical innovation, continuously engages in antibiotic-free farming, and produces safe, safety healthy, nutritious and delicious food for the society. Sticking to the "Five Steps of Environmen-Green and tal Protection" scheme, Muyuan promotes low-carbon circular economy and carries out cleaner developmen production, so as to protect ecological environment. Sticking to the principle of "helping each Win-win other and upholding justice and fairness", Muyuan aims to build a sustainable industricooperation al chain with efficiency and win-win benefits. Muyuan emphasizes benefiting employees Employee and helping them to develop and realize care their life values. Sticking to its values, Muyuan aims to build Public a sharing platform to make continuous progwelfare ress and stay focused for long-term growth.



Muyuan's ESG Indicators

Having experienced the industry cycle trough, feed material price fluctuations, repeated African Swine Fever, 2022 was not an ordinary year. Faced with many challenges, Muyuan was aggressive and innovative, focusing on the essential business and seeking breakthrough at the front line. We achieved high quality development and efficient operations, with the total assets of 192.9 billion yuan and net profit of 14.9 billion yuan in 2022.

Sectors	Muyuan's Concerns	Muyuan's Achievements	Detailed Disclo- sure Location
Economy	Operation with Integrity and Compliance	• Abide by regulations and law, operate business in good faith and in compliance.	Compliance Man- agement
	Corporate Gov- ernance and Transparency	 The corporate governance system and operation mechanism have been optimized. In 2022, the Company held a total of 12 board meetings, 11 supervisory board meetings and 4 shareholder meetings. Independent directors account for 43% of the total to ensure the objectivity of the Company's decision-making. 	Corporate Gover- nance
	Anti-corruption policy	• We are committed to the construction of compliance system and incorruptible culture, with our integrity and honesty training sessions covering all cooperation partners.	Introducing Talent- ed People
	Protecting the rights and interests of shareholders	• We took various measures to protect the rights and interests of the Company's shareholders, and distributed a total of 1.488 billion yuan in dividends in 2022, accounting for 21.56% of the net profit attributable to shareholders of listed companies.	Optimizing Corpo- rate Governance
	Promoting local employ- ment	• 85.51% of our employees, a total of 120,057 persons, are hired locally.	Company Profile
	Utilization of manure	 By the end of 2022, Muyuan had installed a total length of 19.7 million meters of manure application network for farmers for free. In 2022, Muyuan carried out 9,680 agricultural technology training sessions for 11,321 villages, benefiting 277,600 people. Our manure fertilizer was applied in 5.26 million mu of field, saving the use of chemical fertilizer for 58,700 tonnes, bringing an extra income of 295 yuan/mu for farmers through saved costs or increased gains. Muyuan improved 224,400 mu (14,960 hm²) of saline-alkali lands and 72,000 mu (4,800 hm²) of desert lands. 	Boosting Commu- nity Development
	Circular Econ- omy Develop- ment	• A pig farm is a circular economy. Based on the biogas slurry resource of farms, Muyuan has upgraded the way to combine crop planting and livestock farming by developing a circular economy that features mutual benefits between pig farming and crop planting. In 2022, Muyuan established a total of 48,000 mu (3,200 hm ²) of Circular Economy Demonstration Field.	Crop-Livestock Cycle
Environ- ment	Biodiversity and Land Re- source Utiliza- tion	 High standards and strict requirements for environmental impact assessment and site selection Improve soil fertility; leave no hidden dangers in terms of foul water leakage. Ensure that the farm construction does not cause biodiversity protection risk. 	Biodiversity and Land Resource Uti- lization
	Water Resourc- es Management	• Average consumption of clean water for producing per market pig is 1.84 m ³ .	Water Resources Management
	Energy con- servation and consumption reduction	 Improve energy saving process, enhance technological innovation, and implement photovoltaic power generation projects. In 2022, 25.319 million m³ of biogas was used, equivalent to a reduction of 51,241.4 tonnes of standard coal use. 	Carbon Emissions and Addressing Climate Change
	Carbon Emis- sion Reduction	• Carbon emission intensity was 1.0 kg CO ₂ e/kg pork.	Carbon Emissions and Addressing Climate Change
	Responding to climate change	 Identify key risks in the context of climate change and develop action plans for addressing climate risks 	Carbon Emissions and Addressing Climate Change

Sectors	Muyuan's Concerns	Muyuan's Achievements	Detailed Disclo- sure Location
	Occupational health and safety	 We invested 192 million yuan in safeguarding safety and health We have regular free physical checks for employees 	Employee occu- pational health and safety
	Employee care and re- spect	Continue to develop the "Employee Happiness Project" and improve employee welfare.	Safeguarding em- ployee interests
	Protection of employees' rights and interests	 Insist on diversity and inclusiveness, and improve employee communication mechanism and care system 	Unblocking em- ployee communi- cation channels
	Employee training and development	 Expenditure on employee training exceeded 500 million yuan with 100% training coverage rate. Smooth the promotion channels and improve the promotion mechanism. 	Employee train- ing Career develop- ment path
	Sustainable supply chain	 Sustainable soy products sourced from Cargill and Yihai Kerry have accounted for 44.86% of the total soy products sourced by the Company. Improve partner sustainability and help small and medium-sized farmers develop. 	Sustainable sup- ply chain
	Supply chain management	 Strict partner management mechanism. ESG training was held in the whole Company with business partners invited. All suppliers have signed the Supplier Honesty & Integrity Agreement. Drive industry chain partners to develop together. 	ESG management system for busi- ness partners
		 In 2022, we invested 1.142 billion yuan and 6,134 professionals in R&D, applied for 389 patents and obtained 549. 	R&D inspiration and management system
Society	Animal wel- fare	 We provide clean water and most appropriate nutrition to make sure pigs are healthy and energetic. We designed and developed pig houses and equipment on our own to provide comfortable living environment for pigs. We give more focus on pig disease research to reduce the pain of disease for pigs. We develop intelligent devices, such as needless injection, to arrange the pig flow reasonably and help pigs grow happily. 	Ensuring animal welfare
	Food safety and quality	 14 feed mills were certified for FSSC 22000, and farms including Farm No.8 in Huaxian and Farm 27 in Neixiang, got GLOBALG.A.P. certification. Slaughter facilities in Neixiang and Zhengyang are certified for China HACCP quality management system. Neixiang Muyuan Meat Complex obtained the China G.A.P. (good agriculture practice) certification and passed the CNCA forensic auditing. 61.2 million pigs were sold in 2022, with full testing and verification, transparent traceability of the whole industry chain. 7.36 million pigs were slaughtered. 	Product respon- sibility manage- ment
	Rural revi- talization assistance	 Muyuan has actively promoted the construction of high-standard farmland and order agriculture, creating about 100,000 jobs for farmers. Muyuan has joined hands with upstream and downstream enterprises in the industry chain to build an industrial ecosystem, providing jobs for more than 300,000 people. Attracted 40,000 college graduates to work in agriculture. 	Boosting Com- munity Develop- ment
	Co-construc- tion of com- munity	• By the end of 2022, 99.51 million yuan had been invested to support community infra- structure construction, including building bridges and roads in rural areas, constructing cultural parks and improving learning environment of schools. These actions have bene- fited a total of 320,000 households and 1.21 million people in 1,474 villages.	Boosting Com- munity Develop- ment
	Public wel- fare	 Muyuan's "Ju'ai Education Assistance Program" has benefited 220 counties and 110 cities across 25 provinces/autonomous regions, sponsoring 60,000 college students, 540,000 primary and secondary school students, and rewarding 26,000 outstanding teachers. Muyuan has built a public welfare platform to facilitate all sectors of society to participate in philanthropy and create a public welfare ecology. 	Boosting Com- munity Develop- ment

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Assessment of Material Topics

In order to effectively respond to stakeholders' demands and concerns about Muyuan and to better fulfill our social responsibility, Muyuan conducted a research and assessment of material topics along with internal and external stakeholders, identifying material topics of importance to both Muyuan and stakeholders. The assessment results have been used as an important reference for the preparation of the ESG report. Participants of the research include: government and regulators, consumers, shareholders and investors, employees, NGOs, industrial organizations, professional organizations, value chain partners, communities, media and the public.

Materiality Assessment Process

Identify the issues of most concern	Identify Muyuan ESG topics based on the Company's strategies, the 17 UN Sustainable Development Goals, stakeholders' concerns, and domestic and international social responsibility disclosure standards.	We actively reviewed the ESG topics to ensure their comprehensive cover- age of the Company's ESG practices.
Determine investigation objects	Stakeholders were identified in terms of "impacted by" and "impacting" Muyuan, and were made the main tar- gets of the research.	We conducted stakeholder analysis and adjusted and optimized the category of investigation objects.
Conducting research	We communicated extensively and deeply with stakeholders through multiple channels to understand their expectations and requirements. We then made a summary of the concerned issues and made proper use of all kinds of constructive criticisms and sugges- tions.	We sent out research questionnaires to stakeholders, organized interviews and meetings or communicated by email to understand their concerns and sugges- tions on our ESG topics.
Mapping the materiality assessment matrix	We collected the questionnaires and plotted the materiality assessment ma- trix using the data analysis results.	We analyzed these issues according to the investigation and communication with stakeholders to identify changes in the importance of these issues.
Internal con- firmation	The Board reviewed and confirmed the materiality assessment results.	The Board confirmed that there were no significant changes in the materiali- ty assessment matrix of the company.

Muyuan's Material Issues

Economy	Society
 Operation with integrity and compliance Corporate governance and transparency Anti-corruption policy Protecting the rights and interests of shareholders Promoting local employment 	 6 Occupational health and safety 7 Employee care and respect 8 Protection of employees' rights and interests 9 Employee training and development 10 Sustainable supply chain 14 Animal welfare 15 Food safety and quality 16 Customer service 17 Information security and privacy protection 18 Rural revitalization assistance
	11Supply chain management19Co-construction of community12Industrial ecology construction20Public welfare13Scientific and technological innovation20Public welfare
High The importance to stakeholders	

Low

The importance to the Company's business

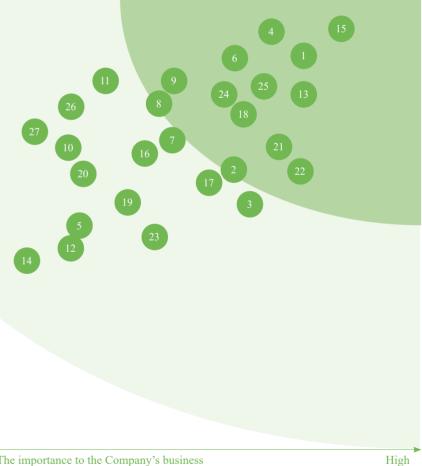
Importance of Material Topics

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- Resource utilization of 21 manure
- Circular economy de-22 velopment
- Biodiversity and land 23 resource utilization
- Water resources man-24 agement

Energy conservation 25 and consumption reduction

- Carbon Emission Re-26 duction
- Responding to climate 27 change



Communication with Stakeholders

We attach great importance to the communication with stakeholders and continuously expand the communication channels. We, therefore, get ways to fully learn about and understand the demands and expectations of all parties, especially the criticisms and suggestions on our CSR work. Thus we can continuously improve Muyuan's sustainable development and bring mutual benefits to Muyuan and its stakeholders. Key stakeholders of the Company include: the government and regulatory authorities, consumers, shareholders and investors, employees, NGOs, industry organizations, professional institutions, community, media and the public.

Stakeholders	Main issues		Communication chann	els
Government and regulatory authorities	 and transparency Resource utilization of • manure Food safety and quality 	construction Rural revitalization assistance	 On-site investigations Work Seminars Daily communication and debriefing Special reports 	 Information disclosure Supervision and inspection by regulatory authorities Project approval and supervision
Shareholders and investors	 Operation with integrity and compliance Corporate governance and transparency 	Efficient operation Scientific and tech- nological innovation	 General meeting of shareholders Investor surveys Performance explana- tion meetings 	 roadshow activities Information disclosure Shenzhen Stock Exchange interactive platform
Consumers	Food safety and qualityAnimal welfare	Carbon Emission Reduction	News reportsSocial media	follow-up callsMarket survey
Employees	• Protection of employ-	Employee training and development Efficient operation	 Workers' congress Communication be- tween employees and management Employee activities Health lectures WeChat Official Ac- count posts 	 Corporate cultural activities Special classes Online communication platform Work meeting Year-end review and planning meeting

Stakeholders	Main issues		Communication channe	ls
Value chain partners	 Supply chain management Customer service Anti-corruption policy Information security 	 Sustainable supply chain Scientific and tech- nological innovation Efficient operation Industrial ecology construction 	 Bidding meeting Fairs Regular visits Daily communication Honesty & integrity meeting Partner site audit 	 Partner Training Procurement and sales platform Customer call-back Market survey Official websites Social media
Community	 Resource utilization of manure Circular economy de- 	 Public welfare Biodiversity and land utilization Co-construction of community 	 Field visits and surveys Charitable activities Volunteer services Agricultural technology services 	 Community communication activities Telephone communication Social media Promoting Crop-Livestock Cycle
NGOs/ Indus- try Organiza- tions/ Professional Institutions	 Resource utilization of manure Circular economy development Food safety and quality Animal welfare Carbon Emission Reduction Biodiversity and land 	 Water resources management Energy conservation and consumption reduction Responding to cli- mate change Sustainable supply chain Scientific and tech- nological innovation 	 Seminars Exchanges and visits Fairs Industry summits/ forums 	 Foundations platform Email/ telephone communication Association confer- ences
Media/ the public	 Resource utilization of manure Circular economy development 	 Promoting local employment Water resources management Scientific and tech- nological innovation Carbon Emission Reduction 	 News reports Social media Official websites On-site investigations 	 Information disclosure Charity aids Telephone communication

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Economy and Corporate Governance



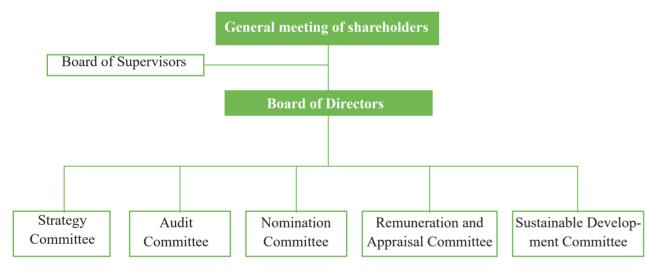


Optimizing Corporate Governance

Corporate Governance Structure

The Company has been improving its corporate governance structure and optimizing its corporate governance system and operation mechanism in strict accordance with the requirements of relevant laws, regulations and normative documents, such as 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*, the *Rules Governing the Listing of Shares on Shenzhen Stock Exchange*, and the *Business Guidelines of Shenzhen Stock Exchange for Self-discipline Regulation of Listed Companies*, etc. Based on systems including the *Articles of Association*, it established a governance structure that comprises the General Meeting of Shareholders, Board of Directors, Board of Supervisors, and Executives, and continuously refine it.

Under the Board of Directors, five special committees are set to provide professional opinions and suggestions for scientific decision-making of the Board of Directors and watch the Company's risk management. Among the five committees, the Sustainable Development Committee was newly set in 2022 for effectively implementing the Company's sustainable development strategies and improving the Company's ability of sustainable development.



Governance Structure

Board Building

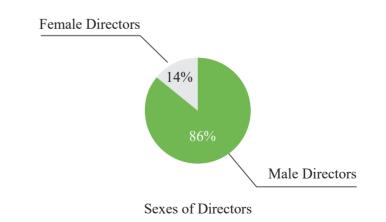
The Company continuously improves its governance structure and optimize its governance system and operation mechanism on the basis of strictly observing requirements made by relevant laws, regulations and normative documents, such as the *Company Law of the People's Republic of China*, the *Securities Law of the People's Republic of China*, the *Corporate Governance Code for Listed Companies*, the *Rules Governing the Listing of Shares on Shenzhen Stock Exchange*, and the *Business Guidelines of Shenzhen Stock Exchange for Self-discipline Regulation of Listed Companies*. In the nomination and selection of the Board of Directors and its subsidiary committees, we comprehensively considered various factors such as stakeholder (including shareholders) opinions, diversity, independence, and competence. As of the end of the reporting period, the Company's Board of Directors has seven directors in total, three of whom are independent directors, accounting for more than one-third of all directors. The personnel composition of the Board of Directors is in compliance with the requirements made by relevant laws and regulations and the *Articles of Association*.

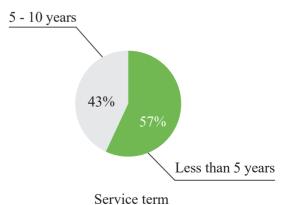
Board Diversity

The members of the Company's Board of Directors, six males and one female, show diversity in terms of sex, age, education, profession, nationality, etc. They have diverse professional backgrounds in technology, management, law, and finance, and are able to provide professional advice on different aspects of the Company's operation and future development.

Name	Sex	Nation- ality	Title	Date of First Appointment	Profession
Qin Yinglin	Male	Chinese	Chairman and President	December 2012	Animal hus- bandry
Qian Ying	Female	Chinese	Director	December 2012	Veterinary medicine
Cao Zhinian	Male	Chinese	Vice Chairman, Executive Vice President, and Head of Finance	December 2012	Financial accounting
Ram Charan	Male	USA standard	Director	August 2018	Management
Li Hongwei	Male	Chinese	Independent Director	August 2018	Management/ Accounting
Yan Lei	Male	Chinese	Independent Director	July 2021	Law
Feng Genfu	Male	Chinese	Independent Director	September 2021	Economics

Board Diversity





Board Independence

The Company selects and appoints Independent Directors in strict compliance with the procedures and qualification requirements set in the *Articles of Association*. It ensures Independent Directors fulfill duties independently and justly in terms of corporate governance, internal control, information disclosure, and financial supervision, without being influenced by major shareholders and actual controllers of the Company, or any other entities or persons who have interests in the Company.

As of the end of 2022, the Board of Directors has 3 independent directors, accounting for 43% of all directors. It satisfies the relevant requirements of regulatory authorities on the proportion of independent directors and can ensure the Board of Directors effectively makes independent judgements and scientific decisions when researching and reviewing material matters. All directors of the Company perform works and duties in strict accordance with relevant protocols. During the reporting period, the Company held 12 Board meetings in total.

During the reporting period, the *System of Independent Directors* was revised and improved. Independent Directors conscientiously fulfilled their duties in accordance with the *System of Independent Directors*. In addition to the powers given to Directors by the *Company Law of the People's Republic of China* and other relevant laws and regulations, independent directors also have the following special powers: (1) Making prior recognition of significant connected transactions, for which an intermediary institution may be hired to issue an independent financial advisory report as the judgement basis; (2) Proposing to the Board of Directors to hire or dismiss an accounting firm; (3) Proposing to the Board of Directors; (5) Publicly soliciting voting rights from shareholders before the Shareholders' Meeting; (6) Collecting opinions from small and medium-sized shareholders for proposing a profit distribution plan and directly submitting it to the Board of Directors for review; and (7) Independently hiring external audit or consulting agencies to audit or consult on specific matters of the Company.

Special Committees

Under the Board of Directors, there has set five special committees, which are the Strategy Committee, Audit Committee, Nomination Committee, Remuneration and Appraisal Committee, and Sustainable Development Committee, to take charge of the discussion and decision-making on significant proposals concerning corporate governance and ESG-related issues.

Committee name	Responsibilities	Operations and Indepen- dence
Strategy Com- mittee	 Study and propose medium-term and long-term development strategies for the Company; Review and make suggestions on major investment and financing plans that shall be approved by the Board of Directors as stipulated in the <i>Articles of Association</i>; Study and make suggestions on major capital operation and asset management projects that shall be approved by the Board of Directors as stipulated in the <i>Articles of Association</i>; Study and make suggestions on other significant matters that affect the Company's development; and Inspect the implementation of the above matters. 	 The Committee contains 2 independent directors, accounting for 67%. In 2022, the Committee held 1 meetings, with a attendance rate of 100%.

Committee name	Responsibilities	Operations and Indepen- dence
Audit Commit- tee	 Watch and evaluate the work performance of the external audit agency; Watch and evaluate internal audit work performance; Review the make opinions on the Company's financial reports; Watch and evaluate the Company's internal control; and Coordinate communication between the management, internal audit department, and relevant departments and the external audit agency. 	 The Committee contains 2 independent directors, accounting for 67%. In 2022, the Committee held 4 meetings, with a attendance rate of 100%.
Nomination Committee	 Make suggestions on the size and structure of the Board of Directors on the basis of the operation conditions, asset scale, and equity struc- ture of the Company. Study the selection criteria and procedures for directors and officers, and make suggestions to the Board of Directors; Search extensively for qualified potential directors and officers; and Review and make suggestions on the candidates for directors and officers. 	• The Committee con- tains 2 independent directors, accounting for 67%.
Remuneration and Appraisal Committee	 Propose remuneration programs or plans based on the main scope, work responsibilities, and importance of the management positions taken by directors and officers, as well as the remuneration level of similar positions in other similar enterprises; Review the Company's remuneration and appraisal system; Watch the function performance of directors and officers of the Company and conduct annual performance assessments on them; Watch and inspect the implementation of the Company's remuneration system; Propose drafts of equity incentive plans of the Company and manage the plans. 	 The Committee contains 2 independent directors, accounting for 67%. In 2022, the Committee held 4 meetings, with a attendance rate of 100%.
Sustainable Development Committee	 Make suggestions on significant decisions related to the Company's sustainable development (ESG included) to the Board of Directors; Watch the implementation and progress of the Company's sustainable development strategies and plans; Watch the Company's performance in the process of tackling key issues such as climate change, public health safety, and social responsibility, and make suggestions to the Board of Directors; Pay attention to important information on sustainable development matters related to the Company's business, study these matters, and provide suggestions to the Board of Directors; Identify sustainable development risks related to the Company, evaluate influences of these risks on the Company, and provide suggestions on these risks to the Board of Directors; and Review the Company's annual <i>ESG Reports</i>, sustainable developments that are related to sustainable development, and provide suggestions to the Board of Directors; 	 The Committee contains 2 independent directors, accounting for 67%. In 2022, the Committee held 2 meetings, with a attendance rate of 100%.

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Protecting the rights and interests of shareholders

The Company standardizes the procedures of the shareholders' meetings for summoning, convening, discussing and voting in strict accordance with relevant provisions and requirements, treats all shareholders equally, and facilitates shareholders' participation in shareholders' meetings. In 2022, the Company held 4 shareholders' meetings and distributes dividends of 1.488 billion yuan.

In 2022, as reviewed by the Audit Committee of the Board of Shareholders and approved by the Board of Directors and the shareholders' meeting, the Company appointed Zhongxinghua Certified Public Accountants LLP as the audit agency for the 2022 annual audit to safeguard shareholders' equity and ensure the financial data is fair and correct.

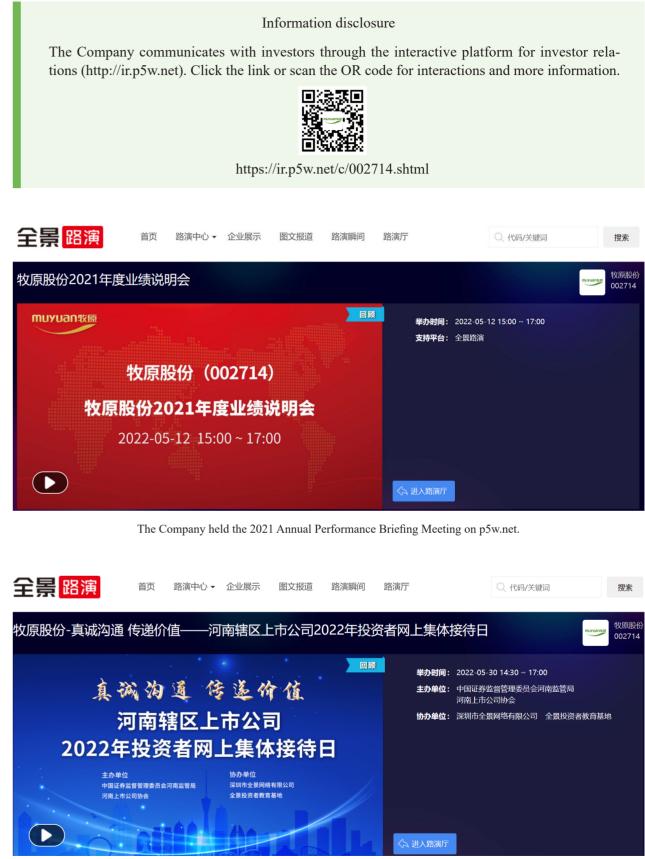


The Second Extraordinary Shareholders' Meeting in 2022

Strengthen communication with investors

The Company may conduct daily communications with investors through announcements, shareholders' meetings, the Company website, the interactive platform for investor relations (http://ir.p5w.net), the investor hotline, etc, in accordance with the Management System for Investor Relations. In 2022, the Company held events such as the Annual Performance Briefing Meeting and Online Collective Reception Day for Investors, effectively responding to investors' concerns. It also actively responds to market concerns by promptly disclosing the news of communications and investigations with investors on its official website. The investor investigation activities held by it involved more than 2,000 participants, which realized adequate communication with investors.

In the progress of the Board of Directors discussing and making decisions on the profit distribution plan and before the shareholder's meeting reviewing the specific cash dividend plan, the Company communicated with independent directors and investors through phone calls, faxes, letters, e-mails, official website, the interactive platform for investor relations (http://ir.p5w.net), etc. Concerns from investors were responded timely.



The 2022 Online Collective Reception Day for Investors of listed companies in Henan Province.



Operation with Integrity and Compliance

Compliance Management System

Build three lines of defense to manage risks

Muyuan attaches great importance to the construction of systems for risk management and internal control. It has made policies and procedures for risk management and built the three lines of defense to manage risks, which involves departments of business operation, compliance management, and compliance audit, to see responsibilities are fulfilled by business units while business and production are focused on and improved.

Integration, Procedure Informatization, and Information Digitization

Key areas: Marketing - Safety & Environmental protection - Labor - Finance & Taxation - IPR

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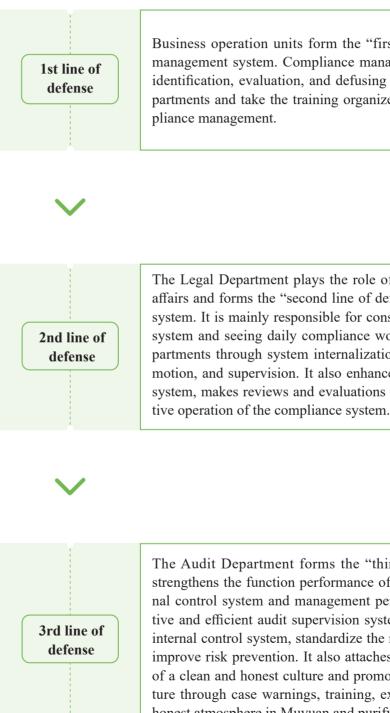
control

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and

Complia

1st line of defense Business operation	2nd line o Compliance 1		3rd line of defense Internal audit
Compliance culture ① Integrate culture into systems; ② Know laws - Understand laws - Observe laws - Use laws	 Procedures, standards, and systems ① Code of Business Conduct ② Employee Code of Conduct ③ Risk map ④ Risk report ⑤ Compliance management measures for business partners ⑥ Compliance guidelines for special businesses ⑦ Lists of posts' powers and responsibilities 	Operation mechanism of compliance management ① Compliance risk identifica- tion and early warning mecha- nism; ② Compliance risk response mechanism; ③ Compliance review mecha- nism; ④ Evaluation and accountabil- ity mechanisms for compliance management ⑤ Evaluation mechanism for compliance management system.	Informatization construction ① Embedded processes ② Process management ③ Connectivity ④ Data sharing ⑤ Dynamic monitoring ⑥ Risk early warning ⑦ Intelligent deci- sion-making
Muyuan values Internal Basic Law of systems and Muyuan procedures	Domestic tive rules and to laws and regulations &	Conventions related business operations Laws governing the ocation of overseas	elated commitments of siness industry association



Business operation units form the "first line of defense" of Muyuan's risk management system. Compliance management personnel take charge of the identification, evaluation, and defusing of compliance risks in their own departments and take the training organizes by the leading department of com-

The Legal Department plays the role of a coordinator in compliance-related affairs and forms the "second line of defense" of Muyuan's risk management system. It is mainly responsible for constructing the compliance management system and seeing daily compliance works completed by the designated departments through system internalization, coordination, organizing and promotion, and supervision. It also enhances the construction of the compliance system, makes reviews and evaluations of compliance, and ensures the effec-

The Audit Department forms the "third line of defense". It continuously strengthens the function performance of supervising and inspecting the internal control system and management personnel by constructing an authoritative and efficient audit supervision system with full coverage to improve the internal control system, standardize the mechanism of exercising powers, and improve risk prevention. It also attaches great importance to the construction of a clean and honest culture and promotes the implementation of such a culture through case warnings, training, exams, etc, on it, creating a clean and honest atmosphere in Muyuan and purifying the business environment.

Compliance System Construction

Muyuan builds and continuously improves the compliance management system and carries out relevant works from three aspects: a) compliance culture, b) procedures, standards, and systems, and c) informatization construction.

Compliance cul- ture construction	The Company takes the construction of compliance culture as a key work. It sets behavior boundaries of risk management and ensures the compliance cul- ture is not only required by the posts but also grows inside the mind and hearts of employees. It establishes a misconduct reporting system with total involve- ment, conducts monthly warning and education activities with the theme of being honest and upright in behaviors, and regularly holds training sessions on general knowledge facts for management personnel to cultivate a compliance culture and enhance compliance management awareness.
Procedures Standards Systems	The Company continuously optimizes the procedures, standards, and systems of business compliance management and has made the procedure control lists for key businesses. In 2022, the Company specified the key areas, personnel, and standards of compliance management; prepared and popularized risk maps and notification cards for safe production, procedures for assessing and certificating activities in limited space, and SOPs for using disinfectants, and; refined the Code of Business Conduct, Employee Code of Conduct, risk maps, risk control reports, compliance management measures for business partners, compliance guidelines for special businesses, and lists of posts' powers and responsibilities.
Informatization construction	The Company integrates the standards into procedures by applying information and digitalization technologies. Technologies of big data and cloud computing were used to monitor the legal and compliance statutes of business manage- ment behaviors online in real-time and analyze risks, thus improving efficiency

ment behaviors online in real-time and analyze risks, thus improving efficiency through timely warning and intelligent decision-making.

Compliance Information Disclosure

The Company strictly follows the requirements of relevant laws and regulations as well as the Articles of Association, Information Disclosure Management, Investor Relations Management and other bylaws to effectively fulfil its information disclosure obligations and disclose the Company's management and matters with material impact in a true, accurate, complete and timely manner. The Company discloses its information through the media including the Securities Times, China Securities Journal, Shanghai Securities News, and Securities Daily and the designated website CNINFO (www.cninfo.com.cn), ensuring that all shareholders of the Company could access the information timely.

Integrity and Anti-Corruption

Integrity management

Muyuan abides by relevant laws and regulations such as the Law against Unfair Competition of the People's Republic of China, the Company Law of the People's Republic of China, the Tort Law of the People's Republic of China, and the Interim Provisions on Banning Commercial Bribery, and opposes all forms of corruption and unfair competition.

The Company attaches great importance to the construction of a management system of integrity and honesty and carries out relevant work from three dimensions: publicity and implementation of integrity culture, punishment methods, and institutional construction. It has developed systems such as the Integrity and Self-discipline Management System, Report and Reward System, Report Acceptance Management System, Joint Handling Mechanism of Muyuan for Integrity and Honesty Events, and Punishment Regulations on Behaviors against Integrity and Honesty, providing a solid institutional guarantee for the Company's integrity and honesty construction. It also pays special attention to the management of business links that are prone to corruption and designates the Audit Department to oversight and reviews regularly.

Foster Muyuan values in employees' hearts and strengthen their vigilance to combat corruption

By promoting its core values and fine conduct and carrying out targeted cultural education, legal education, and warning education, the Company strengthens employees' ideals and convictions, internalizes compliance with regulations and laws into employees' consciousness, and builds a line in employees' minds for combating corruption.

In 2022, the Company actively carried out various activities that involve all staff and the upstream and downstream partners, including thematic training, visits to the warning education base, and promotion of the anti-corruption month, to enhance their awareness of integrity and honesty.



Muyuan employees in an activity for warning and education on integrity and honesty

Punish corruption with zero tolerance and strengthen deterrence against corruption

The Company pays special attention to key business points and links that are prone to corruption. It has made checklists for key posts and businesses and conducts inspections with full coverage and multiple forms to identify obvious manifestations, key areas, and risky links of corruption. As so does, targeted responses could be carried out to regulate and overhaul corruption problems of any scale immediately.

Learn from cases to build strong institutions and prevent corruption

The Company learns from corruption cases and find out the weakness of its institutions, systems, and mechanisms. By deeply studying cases with common features and worrisome signs, it not only regulates and overhauls particular problems but also urges departments involved to apply lessons learned from experience to improve and reform institutions and mechanisms for solid corrective results and a strengthened cage of institutions that prevents corruption.

New anti-corruption tools based on technology

The Audit Department actively utilizes the big data platform to find out clues and carry out disciplinary supervision. It also explores continuously the construction of a digital internal audit system which implements automated and continuous audit monitoring of data through the approach features "audit analysis model + automatic indicator warning + fraud scenario reproduction" that is based on big data, cloud computing, and AI technologies. It puts forth efforts to identify problems with worrisome signs and makes targeted responses to combat corruption. A new pattern of anti-corruption has been initially formed.

A misconduct reporting mechanism with total involvement and ample rewards for whistleblowers

In 2022, the Company continued to improve the construction of the integrity and honesty system. A misconduct reporting mechanism with total involvement was implemented, and complaints can be submitted through various reporting channels such as phone calls, e-mails, WeChat official account, officer website, letters, and visits. Especially, a reporting DingTalk Group covering all employees was created to realize real-time and direct reporting. A reward scheme was also established to encourage both internal and external personnel to watch integrity and honesty behaviors, company management, and major operational issues.



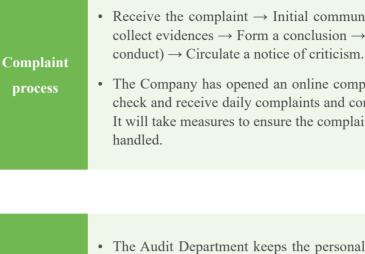


Hotline for public report 17837751511

Hotline for public report sjb@muyuanfoods.com



WeChat Official Account Search for "廉洁牧原"(Integrity Muyuan) on WeChat for on-line complaints.



- information provided strictly confidential.
- Audit Department immediately.

Whistleblow-

er Protection

Mechanism

- have an interest in the person being reported.
- work units except with their consent.

Scientific and Technological Innovation

R&D inspiration and management system

Muyuan encourages technological innovation, creates a favorable innovative environment for R&D personnel, and continuously recruits research talents. It improves the innovation incentive system and builds the intelligent learning platform. It also carries out school-enterprise cooperation and jointly builds institutes for the industry to create a new benchmark for the cooperation among enterprises, universities and research institutes, thus effectively promoting scientific and technological innovation. In 2022, R&D investment was 1.142 billion yuan, accounting for 0.92% of its operating revenue.

As of March 2023, Muyuan has undertaken 3 national key special projects and won 3 Provincial Scientific and Technological Progress Awards.

• Receive the complaint \rightarrow Initial communication and analysis \rightarrow Investigate and collect evidences \rightarrow Form a conclusion \rightarrow Qualitative punishment (for a true mis-

• The Company has opened an online complaint channel and assigned personnel to check and receive daily complaints and communicate timely with the complainant. It will take measures to ensure the complaint matters are promptly investigated and

• The Audit Department keeps the personal information of whistleblowers and the

• It is strictly prohibited to retaliate against the whistleblower in any form, and if the whistleblower suffers retaliation in any form or to any degree, please report to the

• Auditors receiving reports must recuse themselves if they are close relatives or

· Publicity reports and rewards for whistleblowers do not disclose their names and

Recruitment of elite talents

Industrial upgrading needs the support of cross-border talents. Muyuan currently employs 6,134 R&D personnel, including elite talents from top universities and research institutions at home and abroad, for example, Tsinghua University, Peking University, Chinese University of Hong Kong, George Washington University, and Carnegie Mellon University, etc. Their R&D covers multiple professional fields such as information technology, artificial intelligence, and synthetic biology, etc.

Innovation incentive system

Muyuan shares the fruits of development with its employees under the incentive principles that: rewards will go to anyone who creates value; whoever creates value first will be rewarded first; and those who create more value will get more rewards. We will continue to optimize the incentive mechanism and reward handsomely those who make achievements. The reward standards are consistent, regardless of internal and external personnel, professional and non-professional personnel, and the difficulty of the project. Through sufficient rewards, we are able to encourage the talent's enthusiasm and potential for innovation.

To encourage innovative research and development, Muyuan has designated June 22nd as the annual Pig Festival, set up 10 billion prizes for innovative project to reward innovative leaders and teams who make outstanding achievements. The purpose is to stimulate more breakthroughs and more leaders to proceed from the original point, promote the combination of innovation and production practice, materialize R&D results, and boost industry progress.



The scene of the 2022 Pig Festival conference

Building the intelligent learning platform

The Company has built and continuously improved an intelligent learning platform, providing employees with professional skills, experience replication and other learning and development courses, and accurately posting content according to job requirements to better adapt to employees' development needs.

Promoting Cooperation among Enterprises, Universities and Research Institutes

Muyuan actively carries out school-enterprise cooperation with Westlake University, Henan Agricultural University and others. Industrial research institutes have been established to conduct cooperation in prospective studies of synthetic biology, intelligent pig farming, environmental protection, diseases prevention and control, and nutrition R&D, etc. In May 2022, the Westlake University - Muyuan Group Joint Research Institute held the Annual Strategy Seminar, which focused on major industrial issues and conducted thorough discussions on research projects such as intelligent technology, environmental protection, disease prevention and control, and nutrition, with the aim of creating a new benchmark for the cooperation among enterprises, universities and research institutes, and assisting in the transformation and upgrading of the industry.

Collaborative Research and Development

[Case Study] Collaboration between Muyuan and Westlake University to develop an in vivo intramuscular fat measurement algorithm

Muyuan collaborated with Westlake University to develop an in vivo intramuscular fat measurement algorithm. As of the end of the reporting period, this technology has been preliminarily applied to the measurement of intramuscular fat in pig herds. The research team will continue to collect B-ultrasound images of pig herds with high intramuscular fat, conduct algorithm iteration, and further improve the accuracy of algorithm measurement.



The scene of in vivo intramuscular fat measurement

Intellectual Property Right Protection and Patent Progress

Muyuan protects its intellectual property right and applies for patents under the Patent Law of the People's Republic of China and relevant laws and regulations on intellectual property rights. As of March 2023, Muyuan has applied for a total of 1,982 patents, 405 software copyrights, 30 art copyrights, and 281 trademarks.

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2022 Annual Strategy Seminar of Westlake University - Muyuan Group Joint Research Institute

Environment



REES MARKE

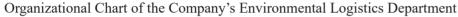


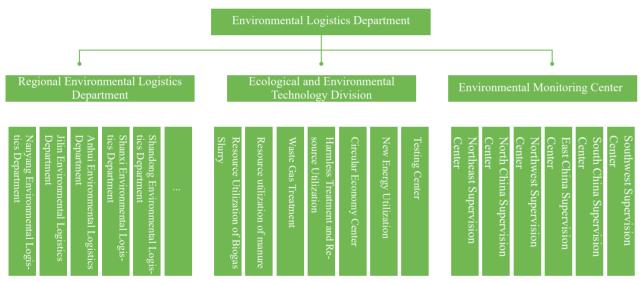


Continuous Improvement in Environmental Management

Improving Environmental Protection Management Mechanism

Muyuan attaches great importance to environmental management and has established a Sustainable Development Committee under the Board of Directors to supervise and manage green and low-carbon work. The Environmental Logistics Department has been established to be responsible for the environmental management. It consists of provincial-level Environmental Logistics Department, Ecological and Environmental Technology Division, and Environmental Monitoring Center. In addition, Muyuan's Environmental Monitoring Center, including six environmental supervision centers, is responsible for the supervision and management of the Company's environmental protection and the continuous implementation and improvement of the Company's internal third-party environmental monitoring system, and regularly reports to the Board of Directors.





As of the end of 2022, Muyuan had implemented a total of 29 management systems of environmental protection work. Among them, during the reporting period, the Company added 21 new environmental protection management systems, standards, and related work specifications, including Safety Risk Grading and Control Measures for Environmental Protection Zones, Water Quality Monitoring and Management System for Farms, and Winter Operation Standards for Multi-story Building Deodorization Systems. We have also optimized and upgraded six environmental protection systems, including the Biosafety Management System for Environmental Protection Zones, Harmless Biosafety Management System, and Implementation Specification for Odor Assessment in the Peripheral Areas of the Farm, in order to continuously improve the Company's environmental management.

Muyuan actively carries out environmental management system certification and continuously improves the Company's environmental protection workflow and standards by keeping in alignment with external certification standards. In 2010, it passed the ISO 14001 environmental management system certification for the first time, and since then, an audit is conducted every three years to dynamically improve the internal environmental management level.



2022 ISO14001 Environment Management System Certificate of Muyuan Foods Co., Ltd.

Boosting Empowerment and Enhancing Capacity for Environmental Management

In order to enhance employees' environmental management capabilities, Muyuan actively carried out empowerment training, heightened employees' environmental awareness, and promoted environmental protection technologies. In 2022, a total of 899 environmental protection training sessions were conducted, with a total of 1,294 hours of training duration and over 90,000 participants.

	Training frequency (Time)	Training duration (Hour)	Coverage (Person)
Environmental protec- tion technical ability training	401	589	73,968
Environmental aware- ness promotion and training	498	755	28,833
Total	899	1,294	92,801

Continuously Innovating Environmental Protection Technology

Major breakthroughs in environmental protection technology in 2022

Anhydrous waste gas purification process

Resource utilization of manure

In order to solve the problem of waste gas of pig house being unable to be treated by wet process under low temperature condition, the Company innovatively developed an anhydrous waste gas purification process. Under anhydrous conditions, the outlet waste gas is purified, with a sterilization rate of 99.9% and an ammonia removal rate of over 99%, breaking the constraints of temperature on the odor treatment process. Muyuan vigorously develops the circular economic model which integrates "pig farming biogas fertilizer - green agriculture". Currently, there are 270 agronomists in Muyuan, who go to the farmland to test the soil and recommend the fertilizer, and have applied manure to a total of 37 kinds of crops such as wheat, corn, sweet potato and lotus root. With comprehensive utilization of manure and scientific planting services provided by agronomists, Muyuan has helped farmers build high-quality demonstration gardens for apples, citrus and grapes, which increased their production and income and effectively promoted the development of featured industries around the world.

Crop-Livestock Cycle

Muyuan actively explores opportunities in agricultural development, organically integrates efficient pig farming with agricultural development. It develops the circular economic model which integrates "pig farming - biogas fertilizer - green agriculture" based on the principle of "production with reduced wastes, harmless treatment, resource utilization and ecological recycling". It promotes the technical model of biogas slurry and manure storage and field application according to local conditions, and creates a ecological recycling that features mutual benefits between pig farming and crop planting. At the same time, Muyuan actively promotes clean production, vigorously develops distributed photovoltaic power generation on pig house roof, improves anaerobic efficiency and biogas utilization, and replaces fossil energy with biomass natural gas. With ecological recycling as the core concept, Muyuan creates a unique environmental protection model.

Control of biogas slurry risk factor

Muyuan accurately identifies 4 risk factors for manure and biogas slurry utilization, clarifies the criteria for promoting the application of 3 such risk factors in different regions and specifies a full-season crop fertilization program.



In 2022, pig manure from Muyuan has been applied to 5.26 million mu (\approx 350,667 hm²) of farmland, bringing an extra income of 295 yuan/mu for farmers through saved costs or increased gains.

Biodiversity and Land Resource Utilization

Muyuan actively carries out biodiversity management to protect the ecological environment and biodiversity of the production and operation areas.

The Nanyang Black Pig, dubbed as the "Shigang Bamei Pig", is a fine breed with local characteristics in Henan Province. In March 2009, Nanyang Black Pig was included in the Henan Province Livestock and Poultry Resources Protection List, selected as a "Geographical Indication of China" in 2015, and included in the National Livestock and Poultry Genetic Resources Catalogue in June 2020.



In order to protect local pig breeds, Muyuan collaborated with Ziyue Nanyang Black Pig Breed Conservation Farm in Shigang Town, Neixiang County to establish Neixiang Shunfa Nanyang Black Pig Protection Technology Co., Ltd. in December 2012, and established Chenggang Nanyang Black Pig Breed Conservation Farm, increasing support for black pig breed conservation work, technology, and scientific research. In 2022, there were 2,639 black pigs in stock, contributing to the protection of local fine breed resources and the multiplication of Nanyang Black Pigs.

We always comply with relevant laws and regulations, strictly conduct environmental assessments before project construction, and conduct a complete ecological impact assessment on aspects such as local vegetation, wildlife, and soil erosion during construction. We actively identify sensitive targets in ecological environmental protection and avoid areas prohibited by the ecological red line for development; after the project is completed and put into operation, we regularly conduct relevant groundwater and soil pollution assessments and monitoring for projects that may have negative ecological impacts to ensure that our production and operation do not have negative impacts on the local ecology. We are committed to managing the entire lifecycle of project construction, taking corresponding measures to protect biodiversity and ecological environment, and ensuring the maximum reduction or elimination of negative impacts. In 2022, there were no incidents of biodiversity damage during the construction of our projects.

Monitoring objects	
Soil	This year, we continued to monitor the other work in 201 subsidiaries, and 34,5
Groundwater	This year, we carried out groundwater and so on in 217 subsidiaries, and 44,14
Surface water	This year, surface water monitoring we tection indicators including pH, amme five-day biochemical oxygen demand gen, suspended solids (SS), dissolved o

We promise not to carry out production and operation activities in the world heritage sites and no-development zones within the ecological red line, and respect all internationally recognized legal reserves, including Class Ia, Ib, II, III, IV, V and VI reserves specified by the International Union for Conservation of Nature (IUCN).



Annual results

e soil, test the soil and recommend the fertilizer and do 500 samples were tested.

monitoring, drinking water safety testing for pig farms 48 samples were tested.

vork was carried out, covering 25 subsidiaries, with denonia nitrogen, permanganate index, total phosphorus, (BOD₅), chemical oxygen demand (COD), total nitrooxygen (DO), etc. 709 samples were tested.

No. 20 Farm of Dengzhou Muyuan in Henan Province

Improving Saline-Alkali Soil

Muyuan actively promoted ecological restoration projects, utilizing biogas slurry to improve 224,400 mu (14,960 hm²) of saline-alkali land in 2022.

[Case Study] Improving Saline-alkali Land in Da'an Muyuan to Promote Efficient Utilization of Land Resources

The western region of Jilin Province is one of the three concentrated distribution areas of soda saline-alkali land in the world. The saline-alkali land here is high in salt content and alkalinity, making it difficult for crops to grow normally. After coming to Da'an City of Jilin Province, Muyuan Company went to the farmland to test the soil. Combining the technical mode of biogas slurry and manure storage and field application, Muyuan started the ecological cycle of "pig manure applied to croplands" and used biogas slurry to improve the content of nitrogen, phosphorus, potassium and other trace elements and soil organic matter in the saline-alkali soil. At the same time, Muyuan, in collaboration with the Jilin Academy of Agricultural Sciences, has selected saline-alkali tolerant rice as the main crop for planting and improving saline-alkali land. After three years of efforts, Da'an Muyuan has formed a saline-alkali land improvement model of "biogas slurry+organic fertilizer+rice planting". And it has developed the Jilin Da'an Saline-alkali Land Improvement Industrial Park with a total of 1,100 mu (\approx 73 hm²) of improved demonstration farmland, achieving a yield of 800 kilograms per mu and a reduction of 20kg of chemical fertilizer per mu. Surrounding farmers guided by Muyuan have improved over 4,000 mu (\approx 267 hm²) of saline-alkali land. Muyuan has set an example for the improvement of saline-alkali land in the western region of Jilin Province, achieving the goal of increasing food crop production based on farmland management and the application of technology.



Aerial photography of Da'an saline-alkali land

Desertification Prevention and Control

Naiman Banner of Tongliao City in Inner Mongolia is one of the banners with serious desertification in Horqin Sandy Land, which accounts for 62% of the total area of the Banner. Naiman Muyuan relies on the utilization of manure resources to carry out desertification prevention and effectively restore the local ecological environment. As of the end of 2022, the total area of desertification control is 72,000 mu (4,800 hm²).



The scene after desertification prevention and control measures carried out by Muyuan in Naiman, Tongliao (June 2016)



The scene after desertification prevention and control measures carried out by Muyuan in Naiman, Tongliao (June 2022)

Comprehensive Control of Ecological Impacts

In production and operation activities, the four major aspects that may have an impact on the ecological environment are: wastewater, waste, treatment of sick and dead pigs, and management of odor. We actively identify the influencing factors in each aspect and take corresponding measures.

Wastewater management

The wastewater generated in the production process mainly includes pig manure and urine, wastewater after disinfection, domestic wastewater, etc. Muyuan has formulated and strictly implemented such systems as the Measures for the Management of Sewage Discharge from the Farm Unit and the Environmental Protection Operation Management System to strictly prevent the overflow or leakage of fecal sludge.

Pig manure and urine are strictly utilized or reused in accordance with the standard procedure, and factors such as weather conditions, local land absorption capacity, farmland fertilization and irrigation patterns are taken into consideration to apply fertilizer regularly and quantitatively in a reasonable manner to prevent excessive fertilization from affecting the groundwater environment.

Domestic wastewater and wastewater after disinfection are centrally recycled to the nearest collection tanks for comprehensive utilization after centralized treatment, and it is strictly forbidden to flow into rainwater drains or off-site ditches.

Muyuan has built wastewater treatment processes into slaughterhouses. The wastewater from white offal rooms and waiting pens will be processed by use of anaerobic/aerobic treatment and denitrification technology, to discharge SS, COD, BOD, total nitrogen and other materials once the relevant post-treatment standards are met.

Medical wastes management

In accordance with the Regulations on the Administration of Medical Wastes, the company formulated the Medical Wastes Management Rule to centrally collect and store medical wastes, and regularly deliver them to a qualified third-party organization for harmless treatment.

Harmless treatment of sick and dead pigs

Adopting the model of "farm collection - closed transportation - whole process monitoring - entry and exit disinfection - mechanical crushing - high-temperature rendering - drying and pressing - oil residue separation", the entire chain is treated harmlessly, ensuring zero loss of dead pigs, zero transmission from disease sources, zero environmental pollution, and zero blind area in supervision, and preventing the spread of diseases.

Waste Gas Treatment

Muyuan has achieved fresh air filtration, precise ventilation, and reduced air consumption through the comprehensive promotion and application of new air filtration pig houses. Meanwhile, in 2015, Muyuan Company developed a pig house deodorization system; in 2016, the deodorization process was upgraded and innovated to enhance the effectiveness of deodorization and sterilization, reduce greenhouse gas emissions generated by exhaust gas escape, and achieve odorless treatment without disturbing the public.

Water Resources Management

Improving Environmental Protection Management Mechanism

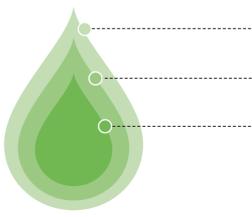
Muyuan continuously improved its water-saving effect by means of process improvement and water management optimization. We monitored the water consumption at different breeding stages and formulated the Standard Water Use Management System which requires saving and controlling water consumption from the source, setting specific water use standards in different regions and seasons, and disclosing and assessing the water use every two weeks. By the end of 2022, the Company had implemented water resources management systems of 5 major categories and 19 sub-categories in total. We also installed accurate metering equipment to monitor the water consumption inside and outside pig farming units to prevent water waste.

Water Saving

The water used in production and operation mainly comes from groundwater and purified wastewater. By using technologies to treat wastewater generated from washing, decontaminating, and deodorizing, 3.0723 million m³ of wastewater was reused in 2022.

Muyuan set positive water management goals.

Freshwater consumption goals (pig farming)



 Short-term goal: 1.73m ³ / head by 2026
 Medium-term goal: 1.6m ³ / head by 2030
 Long-term goal: 1.4 m ³ / head by 2035

	Goals for 2022	Achievements in 2022	Comparison
Amount of fecal water reuse	2.4 million m ³	3.07 million m ³	27.9%
Decontamination water and deodorization water reuse	35,000 m ³	39,000 m³	12.6%
Recycle rate of fecal water	16.9%	21.6%	/
Recycle rate of wastewater used for decontaminating 100% and deodorizing		100%	/

Water consumption intensity in 2022 by segments

Feed processing	0.075 m ³ /ton
Pig farming	1.84 m ³ /head
Slaughter and meat production	0.57 m³/head

Wastewater Treatment and Compliant Discharge

We attach great importance to the treatment of fecal water generated from pig farming and actively reduce COD emissions. Before the treatment, the average COD concentration of raw fecal water is 25,000 mg/L; after the treatment, the COD value is greatly reduced. We mainly use three kinds of processes to treat the fecal water, and the average COD concentration of the effluent from different processes is about 6,500mg/L for resource utilization, about 600mg/L for decolorization and deodorization, and about 200mg/L for reuse, with the removal rates of about 74.0%, 97.6% and 99.2% respectively. The liquid processed by resource utilization and decolorization treatment is applied to farmland as liquid fertilizer, and the water processed by purification is reused in pig farms to replace the clean water for spraying, cleaning pig pens and deodorization. All the treated water is reused, so there is no input of COD into surface water or groundwater.

Emissions Management

Muyuan actively carries out emission management. It reduces controls the waste gas, waste water and solid waste generation.		
Air pollut- ants	The Company has specially set up a comp in provincial regions, subsidiaries and far sions. We take the key factors of atmosphe odor unit (OU), as the assessment indicate ment standards. In 2022, the Company actively upgraded cessfully achieved the goal of reducing am	
Fecal sludge	After being treated, the fecal water ge to farmland or reused in pig farms; an into organic fertilizer or farmyard man	
Dead pigs	The Company has formulated and strict Dead Pig Disposal Management System. treatment are 100% equipped, so as to ach pathogens, zero environmental pollution ar	

Carbon Emissions and Addressing Climate Change

Energy Consumption Management

We actively carried out energy-saving and consumption-reducing management and promote efficient utilization of resources. In 2022, our total energy consumption was 1.0104 million tonnes of standard coal^{Note 1}, and the energy intensity was 0.2269 kg standard coal/kg pork. During the reporting period, we used biogas generated from wastewater to replace natural gas and generate electricity. We continued to use the independently developed technology of pig house heating without fossil fuels and recycle the exhaust heat of pig buildings. We promoted distributed photovoltaic (PV) power generation projects and increased the utilization of solar energy. We took various measures simultaneously to reduce the consumption intensity of traditional fossil energy and build a new pattern of sustainable development of green agriculture.

^{Note 1}:Standard coal, also known as coal equivalent, is the reference unit for the energetic calculation of various energy carriers. Internationally, for the convenience of use and unified standards, when comparing the quantity and quality of energy, coal, oil, natural gas and so on are converted into standard coal according to a certain proportion. In this report, only standard coal is used as the unit for energy consumption calculation.

uces the generation of emissions from sources and strictly ated in the operation process to ensure all emission compli-

plete organizational structure for waste gas purification arms to conduct the management of air pollutant emisneric pollutants, such as ammonia, hydrogen sulfide and tors, and implement the atmospheric emission manage-

l processes and supporting facilities in farms, and sucnmonia emissions by 10% compared with 2021.

enerated from production is recycled and returned and after being fermented, the solid feces is made nure for sale.

etly implemented the Harmless Biosafety System and a. The supporting facilities and equipment for harmless chieve zero dead pigs going astray, zero transmission of and zero blind areas of supervision.

Index	Unit	2022	2021	2020
Diesel oil	Liter	81,893,303.65	70,072,490.09	—
Gasoline	Liter	12,061,076.15	18,417,548.36	12,442,810.76
Gas	m ³	218,839,075.60	129,469,790.60	63,557,681.01
Electricity	MW·h	5,142,753.02	4,328,154.29	1,727,664.52
Total energy consump- tion	Tons of standard coal	1,010,437.76	793,881.24	302,323.91
Energy intensity	Kg of standard coal/Kg pork	0.2269	0.2114	0.1675

Energy consumption intensity of each business sector in 2022

Feed processing	0.0650 Kg of standard coal/Kg pork
Pig farming	0.1493 Kg of standard coal/Kg pork
Slaughter and meat production	0.0058 Kg of standard coal/Kg pork
Others (Mainly referring to construction in progress and administrative office business)	0.0069 Kg of standard coal/Kg pork

Greenhouse Gas Emissions Management

Muyuan believes that green and low-carbon is the inevitable trend of social development. We not only conduct low-carbon management in the scope of environmental management but also believe that the Company can create more social value in the future only by seizing the opportunity of low-carbon management. In accordance with the ISO14064 standard and the 2006 IPCC Guidelines for National Greenhouse Gas Inventories published by the United Nations Climate Committee, we have carried out carbon inventory and accounted for feed processing, pig farming, slaughtering and meat processing as well as other processes.

2022

Muyuan's total greenhouse gas emis-

Emission intensity:

sions reached **4.1029** million tCO₂e

1.00 kg CO₂e/kg pork

Compared with last year, emission intensity decreased by 4.94%

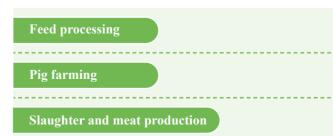
Construction of photovoltaic power generatio emissions by about 2,997 tonnes annually.

In 2023, the photovoltaic power generation project of Leizhou Muyuan's No.30 Farm was officially put into operation. The project is located in Leizhou No. 30 Farm, Leizhou City, Zhanjiang City, Guangdong Province, with an installed capacity of 5.34 MW. It adopts a self-produced and self-used working mode with a grid-connected system that puts extra power to the grid through low voltage. During the reporting period, the project's estimated annual power generation was 5.34 million kWh, which reduced carbon dioxide emissions by 2,997 tonnes.

Accounting scope	2022	2021	2020
Scope 1 Emissions (1,000 tCO ₂ e)	3,894.5	3,076.5	1,496.8
Scope 2 Emissions (1,000 tCO ₂ e)	3,405.6	2,835.4	1,097.0
Carbon emission reduction ^{Note 1} (1,000 tCO ₂ e)	3,197.2	2,510.6	898.8
Total carbon emissions	410.29	340.13	169.51

^{Note 1}: Compared with the technical emission reduction value data, the emission reduction of low-protein diet and pig house heating without fossil fuels.

Carbon emission of each business sector in 2022



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Construction of photovoltaic power generation facilities in Leizhou Muyuan reduces carbon



Leizhou Muyuan photovoltaic power generation project

0.162 kg CO ₂ e/kg pork
0.713 kg CO ₂ e/kg pork
0.123 kg CO ₂ e/kg pork

Climate Change Risk and Response

In recent years, extreme weather has occurred frequently, which has a great impact on normal production and life. The problem of climate change can not be ignored. Muyuan has always been concerned about the impact of climate change on human society and Muyuan's business. We refer to the relevant recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) to identify the main risks of the Company in the context of climate change, and will further formulate ESG-related action plans to deal with climate risks in the future.

Types		Climate-related risks and impacts	Countermeasures
Physical Risk	Short-term risks	The increase in the frequency of extreme weather events such as rainstorms, floods and typhoons may result in damage to production facilities, interruption of operations and reduction of the Company's production capacity. It may also cause damage to personal safety and the Company's assets, resulting in environmental safety issues. The frequent occurrence of extreme weather may cause an increase in food prices, which may lead to an increase in the production and operation costs of the Company, posing a greater challenge to the Company's supply chain management.	Formulate relevant emergency management measures and strengthen extreme weather emergency exercise.
	Medium and long-term risks	Changes in rainfall and extreme fluctuations in weather patterns may lead to higher capital construction costs (such as extended construction period and equipment damage), higher insurance costs for equipment and personnel. Chronic temperature rise requires higher conditions for pig breeding and transportation, resulting in higher costs.	Establish a global supply chain management system, combined with derivatives business, to strengthen the resilience of the supply chain to cope with climate change. Formulate long-term risk response plan; continue to carry out research and innovation of pig house environmental control technology.

Types		Climate-related risl
	Policy and legal risks	China's carbon emiss only requires quota tr power enterprises. If included in the key er of the China Carbon I Exchange (CCETE), the company's carbor compliance costs.
Risk of	Reputational risk	Stakeholders are mor about the Company's climate change, natur consumption, etc. If t work is not up to exp may have a negative i Company's image.
transformation	Market risk	If downstream custom requirements on the c intensity of products, the uncertainty of the sales business and bri market risks.

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risks and impacts

Countermeasures

mission market ota trading for s. If the Company is ey emission entities bon Emission Trade (FE), it may increase arbon emission

more concerned ny's response to natural resource . If the relevant expectations, it tive impact on the e.

astomers make the carbon emission acts, it will increase f the Company's d bring certain Formulate long-term risk response plan; continue to carry out research and innovation of pig house environmental control technology.

Actively publish the Green and Low-carbon Action reports, ESG reports and CSR reports, and systematically disclose the latest actions of the Company on issues such as climate change and natural resource consumption to stakeholders.

Externally, we will actively strengthen the training of the sales, so that the sales staff can recognize the progress of the Company's low-carbon work, and ensure that the Company's carbon emission management related results and performance can be accurately conveyed to the client. Internally, we will continue to carry out research on energy conservation and emission reduction throughout the life cycle, and continue to iterate lowcarbon environmental protection technologies.



Product Responsibility Management

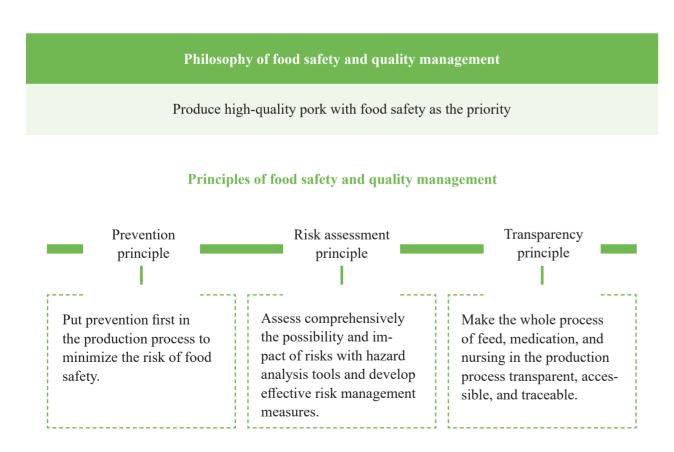
Muyuan adheres to the business purpose of "producing healthy food for the society, improving the quality of life of the public, and helping people enjoy an abundant life", and regards fulfilling the responsibility for product effectively as the top priority of our work. On the one hand, we upgrade our hardware, apply new air filtration in pig houses, and promote the application of equipment of intelligent environmental control, intelligent feeding, and water source ultrafiltration; on the other hand, we continue to optimize our food safety and quality management system to jointly ensure food safety and improve product quality.

Food Safety Management System

In 2022, we improved the food safety and quality management system, and strove for excellence in management structure, security system, traceability of the whole industry chain and cultural development. At the same time, in view of the key and difficult points in food safety and quality management, precise management is implemented to ensure product quality.

Concepts and principles of food safety and quality

Muyuan attaches great importance to food safety and quality. In the management practice, we have gradually summarized the food safety concepts and principles with Muyuan characteristics.



Build an organizational structure for extensive quality management

Muyuan has established an organizational structure for extensive quality management covering five major departments: production, pig breeding, veterinary, quality control, and sales. It coordinates food safety and quality management work from four aspects: food safety, carcass quality, pig quality, and delivery management, being a strong support for ensuring food safety and improving quality.



"711" Food Safety and Quality Assurance System

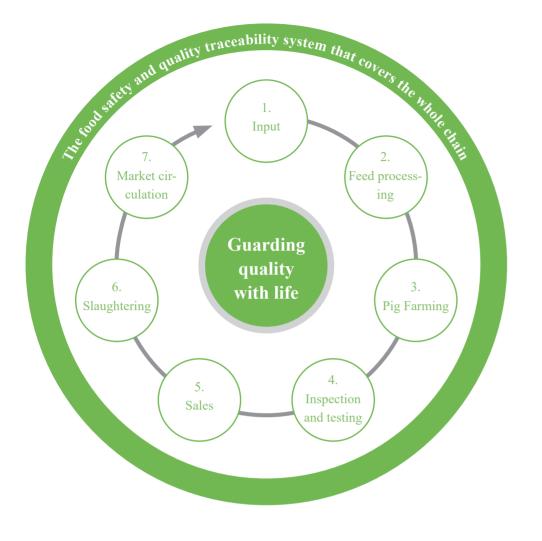
We have always been striving for excellence in food safety management, constantly improving and upgrading food safety management, and established the "711" food safety and quality assurance system.

7 refers to carrying out the whole-chain food safety and quality management from the seven sectors including inputs, feed processing, breeding and production, testing and verification, marketing and sales, slaughter and meat production, and market circulation, thus creating a complete food safety and quality management chain from farm to table, strictly controlling the implementation of standards in all links of the industrial chain, and ensuring the implementation effect of standards.

1 refers to establishing a big data traceability system for food safety and quality that covers the entire industry chain by integrating the information systems of feed, pig farming, and slaughter and implementing full digital quality management, , thus achieving transparent traceability throughout the entire industry chain and ensuring food safety and quality through digitalization.

1 refers to the establishment of a food safety and quality cultural system to unify the cognition and behavior of employees.

Scene of signing the Objective Responsibility Statements for Food Safety and Quality Management in 2023



Quality management system certification

- FSSC22000 system certification (Food Safety System Certification): All feed mills of Muyuan implement the FSSC22000 system standard recognized by the Global Food Safety Initiative (GFSI). By the end of 2022, 14 feed mills have passed the certification of FSSC22000 food safety management system for ensuring the quality of feed with high standards.
- GLOBAL G.A.P. (Global Good Agricultural Practices) Certification: Muyuan applies GLOBAL G.A.P. Standard to standardize the production process and ensure food safety. By the end of 2022, Huaxian Muyuan No. 8 farm, Neixiang Muyuan No. 27 farm, Shangshui Muyuan No. 8 farm, Tanghe Muyuan No.1 farm, and Tongyu Muyuan No. 8 farm had passed the GLOBAL G.A.P. Certification.
- Neixiang Muyuan Modern Agricultural Complex Co., Ltd. has been certified by China G.A.P. (Good Agricultural Practice) and has passed the authentication review by the Certification and Accreditation Administration of the P.R.C.
- Muyuan Meat's slaughter houses in Neixiang County and Zhengyang County have passed the China HACCP Quality Management System Certification.

Food Safety and Quality Training

Through online publicity and offline practice activities, Muyuan continues to strengthen food safety and quality awareness, enhance staff capacity, and ensure the effective implementation of the Company's food safety and quality management work.

Promotion and Implementation of Food Safety and Quality in 2022

The Food Safety Project Team and regions, subsidiaries, and production certification to enhance food safety
By the end of 2022, the food safet larly uploaded the latest food safet that employees could learn food saf
Organize group-regional food safet hear the voice of the market and g data to see through the business, ar provement; establish a meeting res of food safety and quality improver
In view of the technical path, cases, management scheme and of food safety and quality impro- weekly according to business ne
In order to enhance employees' for agement standards, Muyuan carried over 100,000 people participating i 99.06%.

nd the Quality Project Team regularly train the staff in tion lines and organize examinations and competency ty and quality awareness, and work ability at all levels.

ety map had covered all sites, and the Company reguety knowledge and courses to the learning platform, so safety knowledge by scanning the food safety map.

fety and quality management meetings every month to I guide the improvement of internal management; use analyze the gap and clarify the direction of further imesolution supervision mechanism to ensure the results ement.

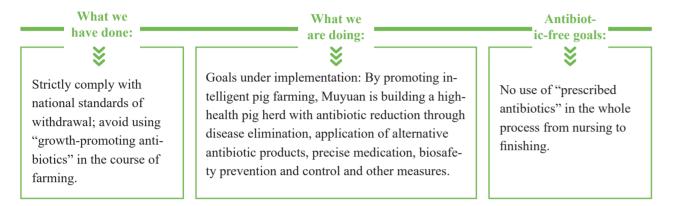
a, technical scheme, outstanding experience and nd requirements, information system application provement, special training sessions are organized needs to help employees improve their abilities.

ood safety awareness and implement food safety maned out food safety certification for all employees, with g in the certification, and the certification pass rate was

Promote Antibiotic-Free Pig Farming to Produce Healthy Pork

Muyuan strictly regulates and controls the use of antibiotics, actively explores the practice of reducing antibiotics, and formulates medium- and long-term plans for order transition from "antibiotic reduction" to "antibiotic-free pig farming".

Formulate the three-level goal of "antibiotic-free pig farming"



Build a defense line of health

Healthy growth environment: Muyuan has developed and applied a new type of intelligent pig house, in which the air is filtered by four layers before entering the pig house. Through intelligent and precise control, each stall is ventilated independently. The waste gas is purified in the air outlet of the pig house, with a sterilization rate of 99.9%, thus offering a healthy and comfortable growth environment for pigs.

Healthy feeding: All feeds are produced by Muyuan. The feed production adopts high temperature sterilization process. The feed is sealed in the transportation process to fully guarantee the safety of feed. The farm is equipped with water source ultrafiltration equipment with a filtration precision of 50 nm to remove pathogens, thus providing clean water for the farm and ensuring the health of pigs.

Biosafety: Muyuan upgrades the biosafety prevention and control system. It improves the process standards from the aspects of personnel, materials and four pests, guaranteeing internal control and external prevention.

Disease eradication: Muyuan has worked out eradication methods for 17 diseases. By the end of 2022, the eradication rate of pseudorabies in pigs has reached 99.94%, and breakthroughs have been made in the eradication of PRRS, Pasteurella and Bordetella.

Vaccine immunization: Muyuan actively promotes the evaluation of bacterial vaccines, designs and implements immunization programs according to the health status of pig herds, and improves the resistance of pigs to bacterial diseases.

Muvuan Pig Disease Control System -- Skynet Project

Muyuan has continuously intensified the research on pig diseases, weaving the Muyuan Skynet of pig diseases. At the beginning of the establishment of the enterprise, a veterinary team was set up to study pig diseases and continued to carry out research, inspection and diagnosis. In the past five years, Muyuan has invested 3 billion yuan in finance, 920 million yuan in pig disease detection and 130 laboratories. In 2022, 151 viruses, 181 bacteria and 27 parasites were found in the survey of 62 million samples. Thus, the Skynet project covering the eradication of all pig diseases was formed, promoting the establishment of a perfect health management system and a world-class veterinary technology platform. Muyuan has worked out the technical path for the prevention and control of major diseases such as PRRS, ileitis and atrophic rhinitis (AR), and achieved the performance of 1,137 g daily gain in batch finishing pigs. In the next step, Muyuan will continue to carry out epidemic disease elimination, promote the production of high-quality pork from disease-free pig farming to antibiotic-free pig farming, and help the high-quality development of global pork food industry.

Health warning and closed-loop medication management

Intelligent health warning

Muyuan uses intelligent inspection equipment and information system to establish a three-level health warning mechanism, captures abnormal pig information through intelligent inspection equipment, and transmits abnormal pig information to pig technicians and management staff through information system.

Precise medication

According to laboratory pathogen diagnosis and drug sensitivity results, licensed veterinarians issue prescription notes, use drugs for diseases, use sensitive drugs to treat abnormal pigs, and pig technicians need to input medication information into the information system in time. Muyuan has set up a drug management team, responsible for formulating drug procurement standards and use standards, monitoring the types, sensitivity and quantity of drugs used in farms through information systems, to achieve closed-loop management, reduce the use of non-essential antibiotics, and promote the process of antibiotic reduction.

Promote the application of alternative antibiotic products

Muyuan actively studies alternative products for veterinary antibiotics, and explores the application of acidifiers, probiotics, plant extracts and other alternative products to reduce the use of antibiotics.

State of certification

As of the end of 2022, 51 subsidiaries of Muyuan have passed the certification of ASF-free communities, and 125 farms have been selected as standardized demonstration farms for livestock and poultry breeding.

Ensuring Animal Welfare

We are committed to promoting animal welfare and fulfilling our commitment to keep our pigs safe, healthy and comfortable. To this end, based on the whole business chain, we have established a whole life cycle animal welfare management system, formulated animal welfare practice standard, paid attention to the physiological and psychological needs of pigs, provided healthy diet, comfortable housing, disease prevention, intensive care and precise management for pigs, and comprehensively practiced the concept of animal welfare to improve the level of pig welfare.

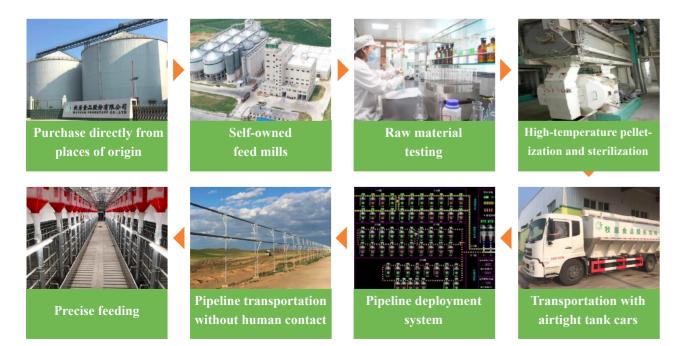
Ensure That the Pigs Are Properly Fed

Optimal nutrition

Based on the consumption of net energy and actual digestible amino acid, Muyuan develops different feed formulas for different breeds, types, growth stages and seasons, and establishes dynamic nutrition models to achieve one formula a day, so as to ensure that the pigs are properly fed.

Safe feed

85 °C 8 min high temperature sterilization technology is applied in the feed production. Sterilization temperature is monitored online in real-time and controlled intelligently to ensure the sterilization effect. The outside air enters into the cooling chamber after coarse-efficiency, primary-efficiency and high-efficiency filtration to create a clean cooling environment. The whole transportation process from feed mills to the farms is airtight. Farms are equipped with smart-operated pipelines for feed transportation to avoid biosafety risk and fully ensure feed safety.



Clean drinking water

Farms are equipped with water source ultrafiltration equipment. The ultrafiltration process filters out bacteria, viruses and particles and other insoluble substances. With the 50 nm filters, 99.99% of pathogenic bacteria can be removed, providing sufficient, clean and fresh drinking water for pigs, and the bacteria transmission through water can be cut off, ensuring the health of the herds. Referring to GB5749-2006 standards, we regularly take water samples and send them to third-party testing institutions for testing to ensure the water quality for pigs.



Undergroundwater test report

Intelligent feeding and ad libitum

The intelligent feeding system of the farms automatically collect information such as feed intake and water consumption, analyze herd health conditions and adjust the nutrition formula according to the plotted growth curve of the herd. Intelligent feeders automatically drop feed and supply water, making it easy for pigs to intake feed, thus achieving precise feeding. The troughs are designed to allow pigs to eat at the same time, avoid injuries caused by fighting over food, and allow all pigs can eat well.



Intelligent feeding in the farm

Water source ultrafiltration equipment

Ensure That the Pigs Are Well Housed

Scientific site selection and pig house design

We regard the location of farms as the key to ensure animal welfare. In addition to complying with relevant national regulations and requirements on land nature and water source protection, farms should also be far away from other pig herds and areas with high incidence of pig diseases, so as to achieve geographical isolation, minimize the probability of disease outbreak and ensure the health of pigs. When make plans for pig houses, number, age, weight, feeding and drinking space and other factors related to animal welfare are considered. The pig houses use insulation materials to keep them warm in winter and cool in summer so that the temperature is favorable for pigs in all seasons.



Yongji Muyuan No. 2 Farm

We strive to reduce protrusions inside and outside the barns and conduct regular inspections and maintenance to ensure that the facilities, equipment, and materials used do not cause harm to the pigs. In 2022, we inspected and renovated the pens, pig runways, pig transfer vehicles, weighing scales, lifting platforms And other equipment of all farms, helping customers inspect pig transport vehicles, dispose sharp and protruding objects, and reduce skin damage of pig herds during sales and transportation.

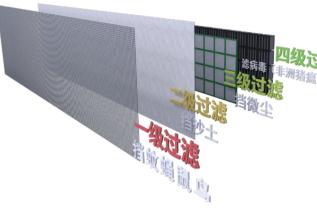


Transport vehicle renovation

Environmental control in pig houses

Muyuan has developed a new type of intelligent pig house to achieve fresh air filtration, independent ventilation and exhaust air purification. The standard for pigs comfortableness has been set, and intelligent control of temperature, humidity and ammonia concentration of pig houses has been realized through intelligent environmental control system. Meanwhile, real-time monitoring of the whole process of pig farming has been carried out based on the Internet of Things technology, so as to create a healthy and comfortable growth environment and protect the health of pigs. In particular, we have also installed a light box for nursery pigs, equipped with heat lamps to supplement the heat source for newborn piglets and maintain a suitable temperature for piglets.

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Four layers of air filtration



Exhaust air purification

Sufficient space

We have formulated Muyuan's stocking density standard as an important basis for the design of pig pen space. The activity space allows all pigs to lie down at the same time, ensuring sufficient space for each pig. We provide pigs with enrichment materials for chewing, rooting and manipulating, so that they can express their nature freely. We keep the pig community structure of each pig barn stable without mixing. So a large number of pigs can live with their penmates and their social needs can be met.





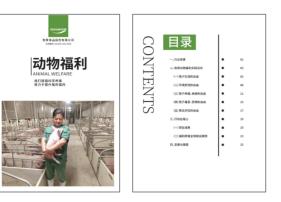
Precise ventilation

Piglets protection light box

Intensive Care to Keep Pigs Healthy

Promoting the concept of animal welfare

Following the globally recognized "5F" (Five Freedoms) principle of animal welfare and based on its own operational characteristics, Muyuan has formulated and issued the "Muyuan's Animal Welfare Manual" with regular training to help employees better understand the concept of animal welfare and promote animal welfare practices. It is committed to making every pig free from hunger and thirst, free from discomfort, free from pain, injury, and disease, free from fear and distress, and free to express normal and natural behavior, so that every employee can be proud of the protection of animal welfare.



Muyuan's Animal Welfare Manual

Management plan

Formulate plans for emergencies:

Muyuan formulates response plans for emergencies such as power failure, fire, flood and blizzard. It installs automatic transfer switches in the pig houses. Once there is a power failure, an alarm will be triggered and the onsite generator will be automatically started to maintain power supply.

Adjust the health management program for pig herds on the farm timely:

The epidemic strains in farms are monitored, and the vaccine immunization program is adjusted according to the health status of pigs. The drug susceptibility database in farms is continuously improved, and the medication program is adjusted in time to reduce the use of antibiotics.

Use information system to record production and medication data:

Muyuan has independently developed a production management information platform and BI data analysis system, which can monitor over 120 indicators from production indicators in various sections to health management indicators, slaughter carcass indicators, and meat quality indicators, keep track of the production and business through data and generate precise performance reports in real-time.

Regulate operation standard:

Muyuan has formulated operation standards for patrol inspection and pig movement, requiring employees not to treat pigs with violence, so as not to cause fear of pigs. The pig herding paddle can be used, but it is not allowed to hit the pig hard to cause injury.

Reduce waiting time for transportation

The transportation plan is formulated by comprehensively considering the factors such as the outdoor temperature and the duration of pig movement. The staff go to the pig house in advance to pick up pigs and mark them, so as to improve the loading efficiency and avoid the stress caused by the long waiting time of pigs for sale.

Empowerment training

Muyuan has a perfect talent training system. Through the combination of online and offline trainings, Muyuan's employees can master technologies involving environmental control, pig care, abnormal pig identification and disposal, biosafety control, cleaning and disinfection. We develop and apply the "Smart Mumu" robot language system. Pig technicians can seek answers and help through "Smart Mumu" when they encounter any problems in production.

Each new pig technician is assigned to an experienced master. So they can grasp the pig-raising technology with master's help as soon as possible. The pig technician should complete the pig-raising related courses and pass the examination before raising pigs independently.

Muyuan regularly conducts special training related to animal welfare for pig technicians to ensure that employees understand the time and environment of possible animal welfare problems, and have the ability to identify such problems and deal with emergencies. In 2022, Muyuan put forward the goal of "disease-free, pain-free and needle-free", continuously improving health management, actively promoting disease elimination, and gradually promoting needle-free syringes to reduce pain in pigs.



Inspection of pig herd status and pig house equipment

The intelligent inspection robot monitors the status of pigs in real time, identifies abnormal pigs according to the algorithm, and notifies the pig technicians and managers by short message.

Needle-free injection

Transport and Slaughter Management

In order to improve the comfort of live pigs in the process of transportation, Muyuan transformed the hog trucks to enhance the anti-skid effect and reduce the risk of pigs slipping or falling. At the same time, it added automatic spraying equipment in the vehicles to create a comfortable environment for live pigs on the way.

Before sales, a reasonable transportation plan was formulated to shorten the transportation distance. Generally, the transportation time was 2 hours to reduce the fatigue of pig transportation. The average speed of transportation was controlled at 60 km per hour. Drivers were required to drive safely according to the operation specifications to avoid pig collision and injury. Lame pigs are prohibited from transportation. The pigs were inspected once every 150-200 km, and the status of the pigs must be inspected at each parking place (applying for the animal inspection certificate, before getting on and after getting off the expressway, resting in the service area, queuing on the spot, etc.), and any abnormal situation shall be dealt with in time to ensure the safety and comfort of the pigs.

Muyuan Meat provided comfortable resting pens for pigs, equipped with spraying facilities, drinking water facilities and fully automatic ventilation system. The temperature, humidity and air quality were controlled by spraying and fans to alleviate the discomfort of pigs caused by transportation. All slaughterhouses in Muyuan adopted carbon diox-ide stunning process to avoid pigs being frightened and experiencing unnecessary pain.

Creating Value Together and Sharing the Future

Adhering to the commercial civilization concept of "achieving justice, fairness, openness, transparency, simplicity, ease of mind, high efficiency and a win-win situation", Muyuan has actively built a sharing platform for industrial interconnection and established multi-dimensional cooperative relations with partners. It has empowered partners from technology, management, capital and other aspects, and helped advance the whole industry chain business and upgrade management system. Through improving efficiency and reducing costs, Muyuan has secured its optimal value, created the industrial ecology, and led the industry development, in a bid to jointly champion and work for a symbiotic and win-win business environment .

Muyuan took sustainable development as an important part of its procurement strategy, continued to benchmark the best practices at home and abroad, integrated the concept of social responsibility into the whole management process of partner access, assessment, and certification. Through deepening cooperation with partners, industry organizations and other stakeholders, Muyuan helped suppliers continuously enhance their sustainable development and jointly built a sustainable supply chain.

ESG management system for business partners

Muyuan has established a ESG management system for partners and integrate ESG into procurement strategies and business processes with reference to the OECD Guidelines for Responsible Business Conduct and the United Nations Global Compact Initiative. Muyuan not only pursues sustainable management within itself, but also actively encourages its suppliers to carry out business activities by the same philosophy. For this reason, we have formulated and issued the Code of Conduct for Muyuan Suppliers, which shall be abided by all suppliers. The Codes consists of five parts: labor and human rights, health and safety, environmental protection, business ethics and management system. It applies to all suppliers of Muyuan Food Co., Ltd. and their employees, temporary employees, etc. With reasonable notice, we have the right to audit suppliers to assess their compliance with the guidelines, and increase or reduce the purchase volume of relevant suppliers, and guide suppliers to improve the level of sustainable development based on their audit results.

Main Contents of the Code of Conduct for Muyuan Suppliers

Labor and Hu- man Rights	Labor environment: The Supplier ment for its employees, and ensur threatened on the basis of color, rac Eliminate the use of child labor and The supplier undertakes to eliminate
Health and Safety	Working environment and condition vironment and necessary facilities a Occupational health and safety: T prevention, management, tracking a Emergency prevention system: The cy plan, carry out emergency drills
Environment	The suppliers shall have relevant erronmental protection laws and regule Adhere to relevant laws and regule wastewater, exhaust gas, solid waste Take actions to reduce greenhouse Actively carry out and support practivation and that avoid the risk of det

shall create a safe, dignified and fair working environire that employees will not be discriminated against or ce, sex, religion, etc.

d forced labor.

te abuse and harassment in the workplace.

ons: The supplier shall provide a clean and safe office enand equipment for employees.

The supplier shall establish procedures and systems for and reporting of work-related injuries and diseases.

e supplier shall establish a disaster prevention contingens regularly, and provide relevant equipment and devices.

environmental permits in accordance with national enviulations.

lations, strengthen the management of water resources, ite, etc.

gas emissions.

ctical activities that are conducive to biodiversity consereforestation.

Business Ethics	Anti-commercial bribery: The suppliers shall not directly or indirectly promise, offer bribes to, or accept bribes by government officials, political parties, other commercial entities, etc. for the purpose of obtaining, retaining business, or attempting to influence decision-mak- ers' decisions. It shall not bribe or transfer improper benefits to employees of Muyuan for the purpose of attempting to obtain improper benefits or maintaining cooperation with Muyuan Adhere to the principle of honest management, and do not slander or defame the goodwill of Muyuan and its peers. Prohibit unauthorized commitments. Do not monopolize the market or conduct unfair competition.
Management Sys- tem	The financial status and business activities of the suppliers shall be subject to the super- vision of the audit unit, It shall be subject to the independent economic examination and evaluation conducted by the audit unit on the authenticity, legality and effectiveness of its financial revenue and expenditure and other economic activities.

In daily business contacts, Muyuan actively carries out ESG compliance-related explanations and standardization work for suppliers, strengthens publicizing and implementation of the concept to suppliers, and supervises whether suppliers have ESG related violations. In the event of human rights violations, environmental incidents or other social events that have a negative impact on suppliers, the company will immediately take action to stop the relevant acts of suppliers, suspend business cooperation, and require suppliers to make corrections within a time limit, otherwise the cooperation will be terminated. This year, we conducted group-level ESG training and invited partners to participate in the training.



Muyuan ESG training site

Anti-Corruption Management

Muyuan attaches great importance to the creation of a business environment. Integrity is the bottom line of all businesses. We actively carry out anti-corruption management from the aspects of system and cultural construction.

Signing of the integrity agree- ment	The whole staff of Muyuan signed a Partners need to sign an integrity ag plete the online examination, and c agreement prohibits bribery, imprope punishment plan.
Deposit manage- ment	The supplier shall pay the deposit of violates the agreement of honesty ar posit shall be deducted.
Platform review management	All business is carried out on the int transparency throughout the process.
Report by all staff	We implement all-staff reporting, o honest reporting mechanism, and fo nal employees and external partners to the company's audit department, managers and the company's audit si the supply chain management system The information of whistleblowers is form and degree of retaliation, and t ance. In 2022, the Audit Department invest integrity, and the relevant responsible dance with the company's relevant in
Advancement of Integrity and Self-discipline	We quarterly organize integrity conf education, hold integrity publicity a ruption Day, and release posters, t strengthen integrity ideological educ

a letter of commitment to honesty and integrity.

greement, participate in the integrity publicity and comcan cooperate only after passing the examination. The per contacts, fraud and other acts, and formulates a strict

of honesty and integrity before admission. If the supplier and integrity in the process of cooperation, the cash de-

ntelligent procurement platform, with full visibility and ss.

open diversified reporting channels, build a clean and formulate the "Report and Reward System". Both interrs can report bribery, improper exchanges and other acts t, and the complaint telephone numbers of department shall be publicized on the business quotation website of em.

is under strict protection. There is zero tolerance for any the acceptance personnel follow the principle of avoid-

estigated and dealt with 106 cases related to honesty and ble persons and units were dealt with seriously in accorintegrity system.

nference to explain integrity cases and conduct warning and education activities such as International Anti-Cortweet articles and videos through online platform to acation.

Strengthening Communication with Suppliers

The Company has established a mature communication mechanism with suppliers, which involves online methods such as WeCom, phone calls, the intelligent procurement platform, WeChat official account, e-mail, and offline methods such as business visits and reciprocal visits. For common business issues, we conduct communication and training with suppliers through group-wide quarterly supplier conferences, quarterly/ monthly supplier meetings of different regions, business notification letters/negotiation letters, etc. For strategic cooperation issues, business negotiations are held through on-site visits to improve cooperation stickiness.

Supplier Performance Management

Muyuan continuously improves the periodic evaluation system for suppliers, carries out quarterly, semi-annual and annual evaluations based on the actual performance of suppliers in supply, quality, price, contract performances, strategic synergy, honesty and integrity and social responsibility fulfillment, and, according to the evaluation results, performs hierarchical managements. On the basis of the results of the annual performance evaluation, the partners are certified annually at four levels of AAAAA, AAA, A, and B. To those outstanding partners, the Company grants honorary titles, signs annual cooperation agreements, increases cooperation share and deepens strategic cooperation.

Sustainable Supply Chain

Reduced packaging

In the procurement process, we reduce the packaging to improve sustainable procurement and strictly implement efficient recycling of purchased materials to avoid waste.

Reduced packaging Procurement and recycling practices

Reduced packaging Procurement and recycling practices							
Joint R&D of environmentally friendly materi- als	The filter elements can be recycled by being replaced with nanoscale and chemical fiber materials in high-efficiency air filters and washable materials in primary filters.						
Material recy- cling manage- ment	 Air filter recycling: cooperate with suppliers to collect and disassemble used filters for waste recovery and reuse. Environmental controller recycling: cooperate with suppliers to collect used ones and take a "three for one" policy for repair and reuse. Battery recycling: cooperate with suppliers to recycle. Woven bag recycling: reuse after soaking for disinfection. 						

Muyuan uses bulk feed tanks to transport feed throughout the process, and promotes feed products' bulk delivery, automatic loading and unloading, closed storage and transportation, and automatic feeding, which not only saves consumables such as packaging labels, but also reduces labor in feed production, transportation and use. In 2022, 20.37 million tonnes of feed were produced, for which, equivalently, we saved 814.8 million 25 kg packing bags.

Muyuan also actively encourages suppliers to carry out packaging reduction actions. Raw and auxiliary materials, such as soybean meal, rice bran meal, stone powder, calcium hydrogen phosphate, fermented soybean meal and amino acids, are transported and stored in bulk or in tonne bags. This year, 1.94 million tonnes of raw and auxiliary materials were purchased, for which, equivalently, we saved 77.6 million 25 kg packaing bags.

Sustainable procurement and low-protein diets

We actively promote sustainable soybean procurement and constantly increase the proportion of sustainable soybean in procurement. Cargill and Yihai Kerry, Muyuan's most important soybean meal suppliers, are practitioners of sustainable soybean procurement, and their direct or indirect supply of soybean products already accounted for 44.86 percent of Muyuan's total soybean product purchases in 2022.

Soybean meal - one of the soybean crushing products - is our important raw material. Though we do not purchase soybeans directly, we not only require soybean product suppliers to comply with non-deforestation standards but also actively advocate upstream suppliers of soybean product companies to gradually reduce deforestation during soybean planting and actively monitor progress, in order that deforestation and habitat loss risks related to soybean procurement can be avoided.

Muyuan had been conducting trials of low-protein diets for pigs since 1992 and widely promoted and applied it in 2000. This technology reduces soybean meal consumption by adding appropriate types and quantities of biosynthetic amino acids while ensuring herd growth performance and pork quality. In 2022, Muyuan's annual soybean meal usage accounted for 7.3%, far ahead of the national average level.

Muyuan has repeatedly disclosed the low-protein diet technology and its application in an open and free manner at industry conferences since 2011 and put "vigorously promote the application of low-protein diets" into the proposal submitted to the National People's Congress to promote the industry's high-quality development. If the low-protein diet technology is applied nationwide, 20.74 million tonnes of soybeans (about a soybean output from 153 million mu/10.2 million hm² of arable land) would be saved and a nitrogen emission of 845 thousand tonnes would be reduced.



Bulk feed trucks

Win-Win Development with Value Chain Partners

Implementation of Shared Warehouse Model

In order to solve the problems in the traditional supply chain, such as insufficient transparency of supply and demand information, severe inventory backlog, long supply cycle and high distribution costs, Muyuan has joined hands with partners to explore and implement the shared warehouse model. As of March 2023, a total of 16 shared warehouses have been set up in centralized pig farming areas across the country, forming a supply network covering North, Central and South China. Through big data analysis of the pig farming scale and expected product demand in the region, supply and demand can be automatically matched. Based on that, inventory planning can be made in a proactive manner to improve supply efficiency, reduce supply chain inventory costs, and lead to efficient coordination and win-win results for all parties in the supply chain.

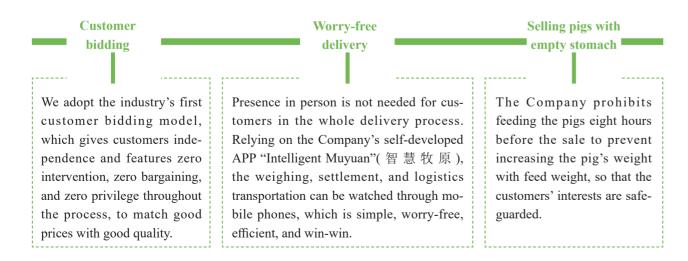


A shared warehouse for Shandong region

Provide Quality Service

Hog sales: customer-first and attentive services

Muyuan always adheres to staying customer demand-oriented, fair and equitable, and constantly optimizes the way and process of hog trading, making transactions more efficient and worry-free. In 2022, Muyuan sold 61.2 million hogs and served nearly 8,000 customers in the pig business.



Continuous iterative upgrade of intelligent sales

We continuously promote the construction of the information-based sales management platform and improve the service level while providing high-quality products.

Intelligent sales APP is iteratively up- graded.	Account opening and contract si tem pushes daily the latest infor bills, etc. Customers can check consult us or give feedback onli responses and solutions. Based of fair, open and transparent trading
Logistics man- agement system is iteratively upgraded.	Online order processing and the to improve vehicle efficiency and
Intelligent Weighing Sys- tem 3.0 has been launched.	Based on algorithms, it realizes functions of magnetic door swi human intervention when weigh improving on-site delivery efficie

Pork sales service: reliable products make peace of mind for customers

With the tenet of "creating value for customers", Muyuan Meat introduces the world's advanced meat processing lines and supporting equipment and applies the ISO9001 quality management system and China HACCP standards to produce "quality-assured meat" for customers. In 2022, Muyuan Meat slaughtered 7.36 million hogs, serving more than 10 thousand customers, and established cooperations with catering retail enterprises such as Pupu Mall (朴朴), Freshippo (盒马), Hormel, and Jiutian Home (九田家).

According to customers' individual needs, Muyuan Meat also provides customized services, exclusive team services and cold chain logistics services to enhance customer experience.

Customized	Exclusive	Cold chain	
services	team services	logistics	
We provide customized prod- ucts that satisfy the product standards and requirements of customers.	Exclusive service team provides timely service to customers.	Pork is transported under cold chain and kept fresh through- out the process to ensure quality.	

signing can be completed for customers online. The sysrmation on available hogs, historical transaction prices, the logistics progress of their orders in real-time and ine at any time, for which Muyuan will provide timely on these functions, it's expected to create an impartial, g environment and improve transaction efficiency.

visualization of the whole logistics process are achieved d reduce the transportation cost of customers.

s automatic weighing and data reading and added the vitches and camera-integrated intrusion alarm to avoid thing pigs, avoiding integrity and honesty issues while iency.

Enhance Financial Support for the Pork Industry

Taking the development needs of partners in the industry chain as the starting point, Muyuan has built a financial service platform for the industry chain, which efficiently integrated business data of core enterprises, government affairs data, Internet big data, etc., achieving full sharing and integration of bank, government and enterprise data.

In 2022, Muyuan continued to promote financial support for the industry. Starting from the development needs of industry chain partners, it built a financial service platform for the industry chain to integrate internal and external data from multiple sources. It carried out financial strategic cooperation of the industry chain with financial institutions, such as Agricultural Bank of China, Bank of China and Zhongyuan Bank; as a result, 1,048 small and medium-sized enterprises got more efficient, convenient, and low-cost supply chain financial services, and 13.45 billion yuan of bank funding support was provided to partners for win-win development. By jointly building an efficient and stable industrial chain fund flow, the pork industry chain obtains continuous force and strength for healthy development.



2022 Henan Exchange Meeting of Pig Farming Elites

Promote Development of Industry

In 2022, we held exchange meetings and built a technical exchange platform, through which 811 technical support and consultations were provided for farmers around the business area in terms of breeding, health management, feeding management, pig house design, environment-friendly operation, food safety, biosecurity, etc., to help them solve practical problems in pig production.

This year, during our participation in the conference on the development of the livestock and poultry slaughter industry organized by the Ministry of Agriculture and Rural Affairs, we elaborated on our production and operation from the aspects of slaughter and processing and discussed the situation and problems of the pig industry with other participating enterprises, in order to jointly promote the stable and healthy development of the industry.

In July 2022, Niu Min, Director of veterinary medicine of Muyuan, participated in the Swine Diseases Control and

Eradication Technology Summit held in Zhengzhou as a representative of the enterprise, where the topic "Eradication Strategies for Major Pig Diseases under the New Situation" was mainly focused on and discussed. During the summit, Director Niu Min shared the strategies and practical experience of Pseudorabies eradication in pigs from the perspective of a pig farming enterprise and reached a consensus with industry professionals on the key points of animal disease control and eradication, so as to help achieve the goal of animal disease eradication.

In order to implement the guidance of "pursuing development with a focus on quality improvement" proposed in the 14th Five-Year Plan as well as accelerate the establishment of association standards and technical specifications that are compatible with such a development of agriculture and animal husbandry, the China Animal Agriculture Information Association, together with leading enterprises in the animal husbandry industry and financial investment institutions, jointly prepared the *Guidances for Animal Husbandry Industry ESG Information Disclosure*.

On March 9, 2023, China Animal Agriculture Information Association held a seminar in Beijing on the association standard *Guidances for Animal Husbandry Industry ESG Information Disclosure (Draft)*. As one of the drafters, Muyuan took part in the discussion and put forward constructive suggestions.

Next, Muyuan will continue to actively participate in the preparation of this association standard, promote the animal husbandry industry to strengthen environmental management, improve product quality and safety, enhance supply chain risk management and introduce public interests into the enterprise value system, so as to realize the joint promotion of corporate value and social value and strive to promote the high-quality and sustainable development of the industry.



Muyuan participated in the seminar on the association standard *Guidelines for Animal Husbandry Industry ESG Information* Disclosure (Draft)



Niu Min, Director of veterinary medicine of Muyuan, was sharing experiences in disease eradication.

Creating a Win-Win Industrial Ecosystem

While developing itself, Muyuan actively builds a shared platform for industrial interconnection and establishes multi-dimensional cooperative relationships with partners. Through management, funding, technology, procurement, etc., Muyuan vigorously supports the common growth of value chain partners and gives full play to resource advantages of all parties for the purpose of improving quality and efficiency and forming a symbiotic and win-win industrial cluster.

Pig Industry Cluster

By the end of 2022, more than 3,000 supply chain enterprises have settled in Neixiang and Nanyang, forming a good ecology for industry cluster development.

Major projects of pig industry cluster of Muyuan in Neixiang

Neixiang Muyuan Meat Industry Complex

With a total investment of 5 billion yuan, the project integrates feed processing, breeding, farming, slaughtering, and meat processing. The 21 new air-filtered multi-story pig buildings, with an annual output value of 10 billion yuan, greatly improve land utilization. After the project is completed, it will achieve an annual production capacity of 720 thousand tonnes of feed and 2.1 million pigs, and an annual slaughter capacity of 2.1 million pigs. Currently, all 21 multi-story pig buildings of the project have been put into operation.

Livestock Equipment Park

It is estimated that the investment of the project is 5 billion yuan, covering an area of 1,500 mu ($\approx 100 \text{ hm}^2$), with an annual output value of 15 billion yuan and 5,000 jobs. Currently, the first phase of the project has been completed and delivered. Enterprises have settled in, covering projects such as controller manufacturing, intelligent electric control system manufacturing, and special glass manufacturing.

Muyuan Foods City

Muyuan Food City is located in the Industry Agglomeration Zone of Neixiang County and takes the main task of forming an industrial cluster for the deep processing of meat products, improving product value, and building a global meat processing base. At present, the first phase of the project with a slaughtering and meat processing capacity of 2 million pigs has been completed and put into production.

Neixiang Intelligent Logistics Park

The project is planned to cover an area of 4,051 mu (≈ 270.07 hm²), with a total investment of about 3 billion yuan. Take Muyuan's pork business as the base, it will utilize the location advantage of locating at the junction of Henan, Hubei and Shaanxi provinces to provide logistics services for various industries and reduce logistics costs for them through road-rail intermodal transport.

After completion, the project can accommodate more than 500 enterprises of various types, annually serve 910 thousand vehicles, handle 10 million tonnes of cargo, create an output value of more than 20 billion yuan and annual tax payment of more than 200 million yuan, and directly provide jobs for 3,000 people, which will strongly support the regional economy take-off.

Since the highway port was put into operation in April 2022, it has completed the construction of a warehouse with a storage capacity of 81 thousand tonnes and served a total of 46 thousand vehicles.

Henan Oianmu Biotechnology Co., Ltd.

Henan Qianmu Biotechnology Co., Ltd. was jointly established by Changzhou Qianhong Biopharma Co., Ltd. and Muyuan Foods Co., Ltd. It takes the resource advantages of Muyuan's domestic pig breeding and slaughtering to build a global-scale and traceability-leading biopharmaceutical base for comprehensive utilization of pig by-products such as pig small intestine, and produces a series of bulk drugs and preparations and related products including but not limited to crude heparin sodium, heparin sodium and low molecular weight heparin sodium. These products are prepared for treating human diseases such as thrombosis or embolism, in order to satisfy the high-speed development of biomedicine and safeguard human health.

Animal Health Industry Cluster

By the end of 2022, Muyuan has cooperated with partners to build an animal health industry cluster based on animal medicine and vaccine projects to promote industry development. The animal health industry cluster mainly includes three animal medicine and vaccine projects: CAHIC-Muyuan project, ULAH-Muyuan project, and Xinghua Biotechnology project(wholly-owned). After the projects are put into production, it is expected to achieve an output value of 4.5 billion yuan, provide jobs for 1,000 people, and achieve the transfer of labor force locally. Besides, the projects will drive the common development of upstream and downstream industries such as material supply, warehousing and logistics, and packaging, so that comprehensive improvement of social and economic benefits can be achieved.

Henan Xinghua Biotechnology Co., Ltd.

Established in September 2019 and funded by Muyuan Foods Co., Ltd., Henan Xinghua Biotechnology Co., Ltd. is a biological product factory that integrates the R&D, production, packaging, warehousing of animal vaccines and related services. The factory is located in Wolong District, Nanyang City, with an investment of 500 million yuan. It is expected to have an annual sales revenue of 2 billion yuan after reaching full production and provide jobs for 300 people.

CAHIC Muyuan (Henan) Biopharmaceutical Co., Ltd.

The company was jointly established by China Animal Husbandry Industry Co., Ltd. ("CAHIC") and Muyuan Foods Co., Ltd. in May 2022. It is located in Wolong District, Nanyang City, with a project investment of 470 million yuan. After the project is put into production, it will have an expected output value of 1.5 billion yuan and provide 300 people with jobs.

Henan ULAH-Muyuan Veterinary Medicine Co., Ltd.

The company was jointly established by United Laboratories Animal Healthcare Pharmaceutical (Inner Mongolia) Co., Ltd. and Muyuan Foods Co., Ltd. in August 2022. It is located in Neixiang County, Nanyang City, with a project investment of 140 million yuan. After the project is put into production, it's expected to have an output value of 1 billion yuan and provide jobs for 200 people.



Employee Welfare

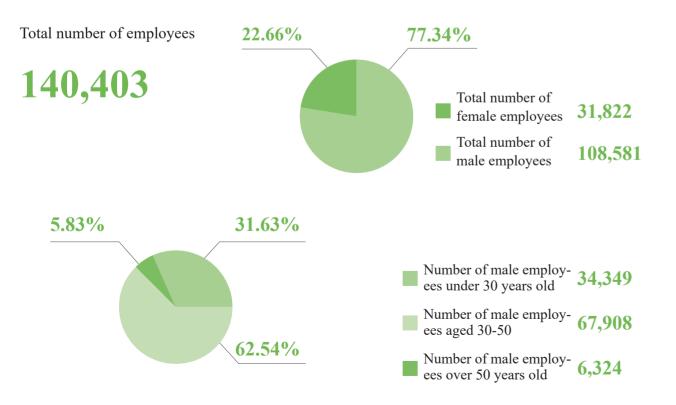
Employee Recruitment and Career Development

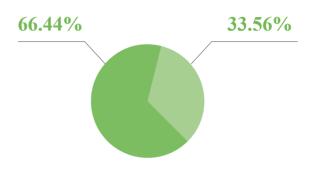
Principle of recruitment

Muyuan adheres to the people-oriented concept and regards employees as the most valuable resource and treasure of a company. People with pure character and a high sense of social responsibility will be be selected, and talents who are consistent inside and outside, principled, honest, trustworthy, responsible, willing to share and give will be appointed. With such a principle for selecting and appointing talents, Muyuan has built up an open platform for young people to achieve their values in life.

During the recruitment process, we strictly abide by the principles of "diversity, inclusiveness, and equality in employment" and respect the human rights of employees. No job applicant will be treated differently or discriminated against due to factors such as their race, gender, color, age, family background, religious beliefs, physical fitness and original nationality, ensuring that everyone is fairly treated at work. In addition, Muyuan strictly follows the Provisions on Prohibition of Child Labor and other related laws and regulations. Muyuan prohibits any subsidiary from recruiting minors under the age of 16 and continuously improves the pre-employment information review mechanism to avoid the use of child labor.

We attach importance to gender equality and support women's career development. By the end of 2022, over 31,000 women were employed in Muyuan, with 31.25% of senior management being women. The number of female staff in management positions is 1,436, accounting for 15.8%. At the same time, we comply with national legal requirements to provide employees with maternity and paternity leave.





We actively carry out campus recruitment and continuously enlarge the Company's talent team of employees with a higher education background. As of the end of 2022, Muyuan had employed 40,000 college graduates and had conducted co-operations with 82 colleges. In 2022, we carried out 128 campus recruitment campaigns, 48 of which are for specialized posts, including production, veterinary, meat, intelligence, feed, etc., to introduce professionals from various disciplines. Meanwhile, we have been actively recruiting international talents through overseas special recruitment campaigns to build a young, international and professional team. 140,000 talented people have been brought together to promote the development of the global pork and food industry.



Number of female employees 10.680 under 30 years old

Number of female employees 21,142 aged 30 and above

Campus recruitment activity

Employee training

Muyuan exercises the ideas of "combining talent selection and cultivation, theory and practice" in talent cultivation and applies a mentorship system which cultivates talents with the guidance of excellent staff. Based on the Company's development and operation needs, as well as the employee growth plans, Muyuan has built a comprehensive talent cultivation mechanism covering the Company's corporate culture, vision management, target management, operation management and professional technology, etc. With professional and diversified learning platforms and learning resources, the Company is committed to cultivating comprehensive talents and helping them grow.

In 2022, the investment for employee training exceeded 500 million yuan, covering all employees. The average annual training time for employees exceeded 100 hours.



2022 Corporate Culture and Management Training



Specialized training on the pig farming knowledge and technology in the southeast region of Henan Province

Intelligent learning platform	The Company releases posts co ment knowledge in the internal "Pig Assistant Xiaowei" and "Pr based on staff position. By sea learning materials and knowledg learning efficiency.		
Basic requirements for new employees: "Ought to Know"	Through the "Ought to Know" e ny ensures that probationary emp rules and regulations, profession fessionalism of employees. During the reporting period, the updated simultaneously to achiev		
Master apprentice management mecha- nism	Every employee is empowered a As of the end of 2022, the Comp We continue to improve the mar reporting period, we defined the areas, encouraging them to teach		
Talent assessment mechanism	The Company selects elite talent on important posts. The selection and expanded, covering personnel		
In-pool talents culti- vation mechanism	The in-pool talents are precisely vation mechanism and customize During the reporting period, we ment, cultivation, and evaluation empowerment.		
Cadre standards	Management cadres are selecte standards. Based on the Compa and shortcomings for cadres, thu		
Career development path			
Based on the characteristics of each department and position tion channel for employees. Through performance management principle of result orientation, all employees receive career of			

n, we have established a scientific and reasonable promonent and cadre management mechanisms, and based on the principle of result orientation, all employees receive career development performance evaluations that meet the characteristics of their positions. A comprehensive, objective, fair and just comprehensive performance evaluation provides employees with a clear and clear career promotion path. We relate promotion channels to qualifications for each position, and define requirements for each job level. Our promotion principles include combining vertical promotion with horizontal promotion, and successive promotion with leapfrog promotion. Based on these principles, we take in employees' personal qualities, occupational competences, post preferences and performance into full consideration to cultivate excellent cadres.

Employee Training Mechanism

ontaining the latest technology, business and manageintelligent learning platforms such as "Smart Mumu", Production Xiaozhi", which accurately push information arching for keywords, employees can obtain relevant ge anytime and anywhere, which greatly improves their

empowerment and certification mechanism, the Companployees are adequately trained on the Company's basic nal competencies and job qualities to enhance the pro-

e Company's management and learning platforms were eve comprehension and tracking of management.

- though the master-apprentice mechanism at all levels. pany had 27,006 masters and 86,059 apprentices.
- naster-apprentice management mechanism. During the e evaluation mechanism for the honor of masters at all h actively.
- nts through a talent assessment mechanism and put them ion methods and scope are continuously being refined nel at all positions.
- empowered through improved the in-pool talent cultized talent cultivation programs.
- e updated the mechanism and improved the empoweron plans for talent pools at all levels, achieving broader

ed, appointed, dismissed, and managed through cadre any's strategic needs, we can clarify the requirements us providing targeted empowerment.

In order to help more employees improve their vocational skills and broaden their career development channels, Muyuan started vocational skill certification in 2021 and 45 subsidiaries have obtained the qualification. The Company regularly carry out training and certification on special topics including corporate culture, operation, remuneration and welfare, food safety and safe production through online training and examinations, practical operation certifications, offline assembly for training, and WeChat mini-Program push notifications. As of the end of 2022, more than 30,000 employees have obtained vocational certificates and become skilled workers who master intelligent equipment and advanced technology.

The Company's business of pig farming has spread to 217 counties/districts in 103 cities in 24 provinces/autonomous regions of China. Through industry empowerment, farmers have become senior pig raising technicians. Currently, Muyuan has over 70,000 senior pig raising technicians.

Industry empowerment enables farmers to become senior pig raising technicians

Bian Dongzhen, the breeding farm manager in Zone 2, Farm 11 of the Laohekou Muyuan.

"I joined Muyuan in 2016, which gave me the opportunity to work near my home as a pig farmer. With the Company's training, I learned how to raise pigs and how to do management. Now I have earned more money and my life is better as well. "Bian Dongzhen said.

Without any further education since graduating from junior high school, Bian had a lot of deep feelings about transforming from a farmer to a technician, a section manager and eventually a farm manager. Speaking of management, she said, "Human efficiency management is a major item to reduce costs. First, everyone can get a high salary by improving their service quality. The second is to help employees set goals and build up confidence."

Under her efficient management, all the employees in her farm worked together to plan for visions and set goals, and achieved satisfactory results. In 2022, her team gained a profit of 28.27 million yuan and she was awarded the title of "Excellent Farm Manager" in the Group.

In Muyuan, there are many people like Bian Dongzhen. Thanks to the opportunities from the Company's development and the talent cultivation system, countless farmers have transformed into professional and senior pig raising technicians, taking on management positions and realizing their life value.



Bian Dongzhen delivering employee empowerment session

Safeguarding employee interests

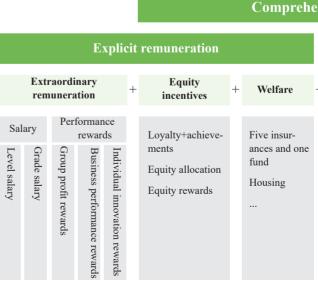
Muyuan strictly abides by the Labor Law of the People's Republic of China, Labor Contract Law of the People's Republic of China, Social Insurance Law of the People's Republic of China and other relevant laws and regulations, and continuously improves the human resource management system, so as to effectively protect the rights and interests of employees and solves their concerns so that they can work here with at ease and confidence. Also, we fully respect the freedom and collective bargaining rights of employees and sign collective contracts with labor unions in accordance with relevant national laws and regulations.

Salary and welfare system

We strictly abide by the Labor Law of the People's Republic of China, Labor Contract Law of the People's Republic of China, Social Insurance Law of the People's Republic of China, Work Safety Law of the People's Republic of China and other relevant laws and regulations, sign labor contracts with employees and pay the five insurances and housing fund, continuously improve the human resource management system, and effectively protect the rights and interests of employees. On the basis of safeguarding the basic rights and interests of our employees, we continue to create a comfortable working and living environment for our employees and provide them with good welfare benefits. At the same time, we have been constantly optimizing and improving our staff welfare system in terms of "clothing, food, housing, transportation, health and affection" in line with market standards.

Muyuan shares the fruits of development with its employees under these salary distribution principles: whoever creates value gets rewards; whoever creates value first will be rewarded first; and those who create more value will get more rewards. Muyuan implements a comprehensive remuneration system. Employees can gain comprehensive remuneration through extraordinary remuneration, equity asset allocation, promotion, learning, honor and welfare. In the process of remuneration assessment and Incentive, we objectively evaluate employees' contributions to the Company based on the result oriented principle of "profit - sustainable profitability - long-lasting enterprise". In 2022, the average annual salary per employee of Muyuan was 94,000 yuan. By the end of 2022, Muyuan had implemented 3 employee stock ownership plans and 3 restricted stock incentive plans, with a total of more than 13,000 persons holding shares.

Salary and welfare system of Muyuan



en	sive pay						
	Pot	ten	tial remune	at	ion		Honor
+	Learning and Opportunities	+	Promotion	+	Trust and ap- pointment of im- portant position	+	Honor
	Learning: Exchange in the industry Outside study Training Opportunity: Participation in key work		Experience opportunities Appointment system Leapfrog promotion		Encourage and recognition Selection for employment		Commen- dation Honor Title

We provide commercial insurance services for employees to improve their welfare. The insurance covers accidental death/disability insurance, supplementary hospitalization insurance, health insurance that covers 36 categories of major illnesses, death from disease/total disability insurance, etc. In 2022, a total of 16,335 people were insured and 498 claims were settled, amounting to 6,003,100 yuan.

Unblocking employee communication channels

We respect every employee's opinions and suggestions, establish multiple communication channels, listen to employees' voices through various forms of feedback and help them solve problems. In the design of communication channels, the Company has conducted sufficient negotiations with employees and the trade union to ensure that employees' demands and opinions are unobstructed. To protect the rights and interests of employees, we set up anonymous and real-name feedback forms, so that employees can feedback their opinions and suggestions without any worries. The feedback can include but is not limited to: salary, welfare, catering services, system operation, personnel movements, etc. The feedback from employees will be analyzed and screened by a dedicated person. By integrating resources and promptly handling issues, the communication between the Company and its employees is strengthened, jointly building a harmonious work environment.



Trade union membership rate 100%

After receiving feedback on employee issues, the contact person will communicate with the employee's immediate supervisor within the specified time to understand the actual situation and prioritize resolving employee issues within the department. If the issue cannot be solved internally, the immediate supervisor shall report to the Company's labor relations person in charge, establish a temporary problem handling committee, assist in problem handling, and protect the legitimate rights and interests of the employee.

Employee care

Employee physical examination

Muyuan attaches great importance to the physical and mental health of employees, and takes good care of them through activities such as health examinations and health services.

In 2022, 78,000 employees underwent health examinations. At the same time, the Company collaborated with medical institutions to provide health service. With 1,370 employees participating in free health clinics and health examinations, their physical and mental health is ensured.





Employee health examination



Employee health examination

Female employee care

We always respect and care for women through activities such as female health examinations and vaccinations.

Female exclusive physical examination

Every year, for the "Women's Day" on March 8th, Muyuan organizes women's exclusive physical examination activities to care for all female employees. The examination includes color Doppler ultrasound, traditional Chinese medicine, internal medicine, surgery, gynecology tests, etc.



Female health examination

Building happy family for employees

The "Mother-Child Project" is an important component of Company culture, where "mother" represents parents and "child" represents children. Following the concept of making every family and every child happy, Muyuan has developed the Mother-Child Project into a platform, where children in Muyuan can perform, experience, grow, gain a positive life attitude, improve their learning, thinking and mental models, and create a better future through their own efforts. Parents can also exchange and learn good education methods on the platform, correctly perceive their own influence on their children's growth, and then set an example by constantly developing themselves to set a good example for their children, so that parents and children can progress and grow together.

Muyuan holds two Mother-Child Project events annually, including the Mother-Child meetings, employee children's summer camp, interest courses, and Mother-Child gifts. Under the guidance of the "Mother-Child Project" culture, Muyuan's parents and children care for each other, share with each other, set an example for each other and grow together. At present, there are over 60,000 employees' children growing up healthily and happily in Muyuan Paradise.

Treat employees as family and help them grow. Build career platforms to help them fulfill their values in life; make

every employee and every family feel happy, and enjoy a happy life in Muyuan. This is a provision in the Basic Law of Muyuan.

In Muyuan, there are 11,395 couples. These couples serve as an example for each other and share the same ideals at work. In life, they care for each other, respect each other, support each other and improve together. At the end of each year, Muyuan sets up a "Model Couple" award in the commendation conference. In 2022, Muyuan commended 499 "model couples" in the commendation conference at the end of the year.

Model Couple - Li Yinghui and Kan Yanling

In 2016, Muyuan actively responded to the national call to expand pig farming to Northeast China. Taking the business needs into consideration, Li Yinghui went to Northeast China to work hard in the hard condition. Finally, by the end of 2017, Lanxi Farm 1 was successfully put into operation. In November of the same year, his wife Kan Yanling also came to Lanxi Farm 1. Starting from zero, Kan Yanling led her team to purchase and learn professional books for swine disease and pig farm management to improve their professional level. The couple have been constantly moving forward in learning and practice, constantly breaking through barriers and

going beyond themselves.

Over the six years, they have witnessed each other's growth and also the development and expansion of Heilongjiang Muyuan. Now, Li Yinghui serves as the Production Director of Heilongjiang Muyuan, and Kan Yanling serves as the Head of Veterinarian of Heilongjiang Muyuan. With their joint efforts, 3.2 million pigs were produced in Heilongjiang Muyuan in 2022, which provided jobs for over 7,000 people.

Enrichment of culture and entertainment

In order to enrich employees' life, practice and spread Muyuan culture, and make employees work and live happily, we have carried out diversified cultural and sports activities.

Assistance to employees in need

Muyuan regards employees as family members, continuously optimizes employee assistance plans, and continues to carry out assistance activities for employees in need. In 2022, the total amount of assistance for employees in need was 31.438 million yuan.



Photo of Model Couple - Li Yinghui and Kan Yanling





Staff spring outing activity

Winter Solstice Dumpling Making Activity



Chinese Valentine's Day activities for young staff

Employee occupational health and safety

Safety production management system

Muyuan always attaches great importance to safety production. We have established a three-level safety management structure of "headquarter-region-subsidiary". Each business department has a safety management section, which is responsible for the safety management of the department. At the regional level, each regional manager serves as the director of safety committee, and the safety committee member group, which is composed of the head of each department and the full-time responsible persons of safety management of the regional feed mills, is fully responsible for regional safety production. At the subsidiary level, the subsidiary managers serve as the directors of the safety committee, and the safety committee member group is composed of the head of each department. Full-time or parttime safety personnel shall be assigned in key departments such as production, feed, environmental protection, etc., to consolidate the responsibility of safety production at all levels. Muyuan also sets up safety inspection office to In 2022, **192.36** million yuan was invested in safety production.

comprehensively supervise the safety production of the Company. At the same time, in the development, implementation and evaluation of the safety production management system, we actively communicate with employees through various forms of employee communication channels, and pay particular attention to the opinions and demands of front-line employees.

The Company has set up a sophisticated safety production management system, with 12 major sections and 35 existing safety management systems, mainly including "Risk Accident Management and Assessment System", "Safety Inspection and Hidden Danger Screening and Management System", "Safety Management System of High Risk Operations", "Safety Management System for Special Equipment", "Safety Management System for Dust Ignition-proof in Feed Mill", etc. In 2023, the Company plans to revise and improve relevant work processes and systems, such as safety education and training, limited space management, operation procedures of different positions of each business department, safety management of external construction in feed mill, safety management of silo operation, safety management of construction, fire safety responsibility system, risk accident management and assessment system of Feed Production Department, etc., so as to continuously improve the safety production responsibility management mechanism of the Company.

Management policy

· People-oriented, safety first, prevention as the core, comprehensive management

Management philosophy

- Safety is achieved through management. All safety accidents can be prevented and all potential safety hazards can be controlled
- Safety comes from design, quality, responsibility and capability
- Zero tolerance for all violations of rules and regulations

Management principles

- aging business
- source of process and prevent accidents
- Third-party supervision by the Safety Inspection Office: Strengthen management and assessment, all departments to build a safety management system and realize closed-loop safety management

· Each department is the first responsible party for safety management, and must manage safety while man-

• Each department takes their own safety production responsibility: Eliminate hidden dangers from the

Management requirements

- Managers at all levels are directly responsible for safety within their business scope
- All employees must be involved in safety management and adhere to the whole process and all-round safety management
- Employees must receive strict safety training before they are allowed to work
- Management cadres at all levels must conduct safety inspections and all hidden dangers discovered must be rectified in a timely manner
- All safety incidents must be reported, analyzed and handled in a timely manner

Occupational health management measures

Muyuan adheres to the philosophy of "people-oriented" and attaches great importance to the occupational health management of employees. We strictly abide by the *Law of the PRC on Prevention and Control of Occupational Diseases*, the *Law of PRC on Work Safety* and other relevant laws and regulations, and have formulated and issued the *Management System for High-Risk Operations*, the *Management System for Labor Protective Supplies* and other relevant standardized regulations and systems.

Management of labor protective materials

We strictly implement the *Management System for Labor Protective Supplies* and provide employees with complete labor protective supplies according to business types. For the labor protective materials used in all kinds of high-risk operations, we check and make up for the missed ones every month, and verify and correct the invalidated, damaged or misconfigured materials to ensure the operation safety of front-line employees.

Employee physical examination

We actively organize physical examination for front-line employees and managers, track and manage employees with health abnormalities, and provide medical services for them to safeguard their health.

Occupational health and safety training and investment performance

Category	Unit	2022	2021
Investment in occupational health and safety training	1,000 yuan	12,532	1,290
Total duration of occupational health and safety training	Hour	43.5	15
Number of participants in occupational health and safety training	Person	878,000	749,600

Promoting Community Development

Strengthening Community Communication

Muyuan is committed to strengthening communication with stakeholders by actively communicating with local residents, establishing a good community interaction mechanism, organizing regular communication and exchange to respond to community concerns in a timely manner, fully identifying and assessing the impact of the production and operation of the Company on the community. Muyuan respects the cultural customs and norms of the community where it operates, and seeks to minimize the impact on the local environment, ecology and society.

The Company has set up convenient service boards at the entrance of each pig farm (including the name, position and contact details of the contact person), and assigned specialized persons responsible for following up the demands of local residents. Community residents with complaints or requests can contact the relevant personnel by phone, and Muyuan promises to discuss and reply in a timely manner after receiving the feedback.

Reciprocal assistance between villages and the Company

In the early stage of promoting crop-livestock cycle in Zhuxi village, the villagers did not understand and did not accept the project. The management team of Dengzhou Muyuan No. 1 Farm actively adjusted their work strategy, arranged personnels to make door-to-door visits to actually understand the villagers' concerns, and then explained in detail the value of crop-livestock cycle and biogas slurry in a positive manner. In the end, they gained recognition from the villagers and built a healthy and harmonious relationship between the villages and the Company. From August 2021 to June 2022, the new biogas slurry pipeline network of Zhuxi Village covered 1,000 mu (around 66.67 hm²) of farmland. In May 2022, the repaired old biogas slurry pipe network covered 200 mu (around 13.33 hm²) of farmland.

A farm improves the ecology, stimulates the economy growth, and benefits residents of its surrounding area. We communicate regularly on a monthly basis, and help people in the surrounding communities through everyday activities such as agricultural technical services, road construction and well drilling, poverty alleviation and aid to farmers and agriculture, flood and drought relief, and donations to education, thus contributing to the rural revitalization.



Disclosure of communication methods to maintain relations with community



Zhuxi Village presented a thank-you flag to Dengzhou Muyuan

Boosting Community Development

Helping farmers to increase income

We always pay attention to aid agricultural development through the innovation of environmental protection technology to promote a circular economy model that integrates farming and animal husbandry, as well as the crop-livestock cycle as a whole. With pig farms as center, we rely on manure to provide aid and services to farmers and agriculture, help them apply fertilizer scientifically, improve the soil fertility of surrounding land, reduce the application of chemical fertilizers, and help farmers reduce investment and increase income. In 2022, we provided 9,680 agricultural technical services, serving 11,321 villages and training 277,600 farmers. As of the end of the report period, we had provided 24,917 agricultural technical services and trained 849,100 farmers in total.

Muyuan agronomists actively serve local farmers

Zhang Lijuan, with a Master's degree from Huazhong Agricultural University, has been engaged in exploring the agricultural circular economy model, opening up the technical path for crop resource utilization and other aspects of work ever since she joined Muyuan in 2020. Now local farmers around Shangcai Muyuan, in Zhumadian, Henan Province, see her as a "senior consultant" and will turn to her for any agricultural problems.

In December 2021, Zhang Xueling, a local farmer living near Shangcai No. 13 Farm, found that some of the wheat in her farmland was growing abnormally, yellowing and showing other symptoms. She was very worried about the next year's yield. It suddenly struck her that the agronomists of Muyaun had talked about relevant knowledge in the training class of agricultural technical services last month, and she contacted Zhang Lijuan.

Through on-site inspection and sampling analysis, Lijuan determined the cause of the yellowing of wheat and developed precise solutions, and very soon the wheat was restored to normal growth vigor and started growing healthily again. After this incident, Zhang Xueling trusted Muyuan agronomists more and often came to Lijuan to discuss planting management, such as biogas slurry management during the overwintering period, spraying for disease prevention during the early flowering season of wheat, and prevention and control of pest, disease and weed.

Zhang Xueling farms more than 200 mu (around 13.33 hm²) of farmland. In June 2022, the yield per mu for wheat was 1,200 kilograms, with an increase of 38,000 yuan income by reduced investment. In October, the yield per mu for corn was 1,210 kilograms, with an increase of 35,000 yuan income by reduced investment. The wheat and corn made a profit rise of 73,000 yuan by reduced investment in the whole year.

Zhang Xueling said happily: "Using Muyuan biogas slurry not only reduced inputs of fertilizer and seeds, but also saved water. Meanwhile, Muyuan follows certain standards, so their products will only be good for the

crop." She continued with a smile, "In the future, we will stick to Muyuan biogas slurry. It saves fertilizer and improves production, such a good thing, why not?" Her relatives and friends also followed her in using Muyuan biogas slurry.

Muyuan helps farmers increase income through Crop-Livestock Cycle. There are many excellent agronomists like Zhang Lijuan in Muyuan. They work in the field to do experiments and promote technology application. They are rooted in rural areas, breaking the traditional local planting model, and guiding farmers to improve yields and increase income. They increase yield by working on the farmland, promote income increase with science knowledge, and contribute to the national food security.



Muyuan agronomist Zhang Lijuan demonstrated the use of biogas slurry

Providing employment

We strongly support and promote local employment by recruiting employees in the locations of our subsidiaries to take in the local labor force. By the end of 2022, we had taken 120,057 local workers on board, with a local employment rate of 85.51%. Meanwhile, we have made efforts in our whole industry chain integrating feed, pig breeding, pig raising and pig slaughtering, directly creating more than 140,000 jobs and contributing to common prosperity.

Local procurement

We adhere to the procurement concept of justice, fairness, openness and transparency to expand the procurement of unprocessed grains locally and contribute to community economic development. In 2022, the Company procured a total of 16.0712 million tonnes of local unprocessed grains, with a procurement value of 45.874 billion yuan.

Contribution to Community Infrastructure and Cultural Construction

We always adhere to the core value of "creating value and serving society", contribute to community infrastructure and cultural construction, realize the co-construction and sharing between the Company and communities. We seek to provide convenience for community residents, enrich community cultural life, and build a harmonious and warm environment.

Contribution to community infrastructure

Adhering to the principle of "benefiting the locality where we are", Muyuan continues to build the infrastructure for the benefit of the local people, such as road construction, landscape projects, plaza construction, street light projects and water supply projects. As of the end of 2022, Muyuan had donated 99.51 million yuan to these projects, benefiting 1.21 million people from 320,000 households in 1,474 villages, creating a beautiful, safe and convenient living environment for villagers and greatly improving the quality of life for local residents.



Street light project

Contribution to community infrastructure

Contribution to community cultural construction

We always attach importance to community cultural construction and provide continuous support in carrying out community recreational and sports activities, preserving history and culture with local characteristics, and developing culture with ethnic characteristics. By the end of 2022, Muyuan had invested a total of 25.45 million yuan to support community cultural construction, benefiting 1.12 million people from 300,000 households in 700 villages.



Liangzhou Muyuan supported Fengle town in organizing Shehuo and Chinese New Year celebration.



Naiman Muyuan sponsored Xinshulin village's cultural activities on International Women's Day

Education Support

Muyuan always sticks to the social responsibility view of "do what you know is right to benefit society" and proactively engages in public welfare projects to promote education and social development.

Education Assistance Program

Muyuan has been deeply engaged in the field of education charity for 20 years since 2003, launching a series of public welfare projects called the Muyuan "Ju'ai Education Assistance". By the end of 2022, "Ju'ai Education Assistance" public welfare projects had donated 270 million yuan in total.

Ju'ai Education Assistance Project - Spring Rain Program

Since 2003, we have continued to carry out the "Ju'ai Education Assistance Project - Spring Rain Program". Since then, we have donated more than 90 million yuan, awarded 26,000 outstanding educators, and benefited 519 schools in 38 counties (districts) in 12 provinces. "The Spring Rain Program" not only promotes the good moral of respecting teachers and valuing education, creates a good social atmosphere, but also raises the enthusiasm of teachers in teaching and improves rural education quality. At the same time, it attracts more social forces to support the development of rural education.



Henan Neixiang Muyuan Ju'ai Education Assistance - Spring Rain Program Ceremony

Ju'ai Education Assistance Project - Golden Autumn Program

Since 2005, we have carried out "Ju'ai Education Assistance Project - Golden Autumn Program" every year, aiming at rewarding outstanding college students, promoting education development with awards, supporting education development, cultivating outstanding talents for society, and promoting social progress.

The Program has been carried out for 18 years and has benefited more than 60,000 outstanding college students with a total reward value of 163 million yuan. In 2022, the project covered 179 counties (districts) in 87 cities in 23 provinces, benefiting 16,907 students with a total reward value of 51.79 million yuan.



Henan Huaxian Muyuan Ju'ai Education Assistance - Golden Autumn Program Ceremony

Ju'ai Education Assistance Project - Spring Seedling Program

Since 2017, we have continued to carry out the "Ju'ai Education Assistance Project - Spring Seedling Program", aiming at improving rural education conditions, supporting the development of education in communities and villages, and helping rural children grow, by donating school bags, stationery and other necessities to children in rural areas.

Since the launch of the program, more than 540,000 school bags have been distributed to school children in 2,935 communities and villages of 159 counties in 22 provinces. In 2022, 46,622 school bags were handed out to students in 54 counties in 15 provinces. Meanwhile, more than 4,100 volunteers have participated in the project, carrying out volunteer activities and passing on love and responsibility.



Guangxi Zhuang Autonomous Region Wuming Muyuan Ju'ai Education Assistance - Spring Seedling Program Ceremony

Ju'ai Education Assistance Project - Morning Dew Program

Together with Ju'ai, we launched "Ju'ai Education Assistance Project - Morning Dew Program", aiming at ensuring safety of drinking water for primary school students, and improving the drinking water environment of schools in rural areas through donating water purifiers to schools in need. While donating water purifiers, volunteers of Ju'ai went into the classroom to teach students about clean drinking water and water conservation, conduct small experiments on water purification, and help students to develop good habits of drinking water and water conservation.



Ju'ai Education Assistance - Ceremony site of Morning Dew Program

Poverty Reduction and Sustainable Development Demonstration Project in Neixiang County

The Poverty Reduction and Sustainable Development Demonstration Project in Neixiang County is the first county-based sustainable development project of United Nations Development Program (UNDP) in China, combining the essence of the 19th National Congress and the UN Sustainable Development Goals (SDGs) Framework. By mainstreaming the SDGs into the development strategy of the Neixiang County, it enhances the capacity of the local government to apply the SDGs Framework to guide the resource planning, supports the social and economic sustainable development, improves people's livelihoods in Neixiang County, promotes "rejuvenation of rural areas", and engages more key stakeholders in the process of addressing environmental challenges, rural rejuvenation, public goods and education, inequality, climate change, conserving biodiversity and promoting sustainable development.

In 2022, the Muyuan Education Foundation, UNDP, and SDGs Workshop jointly carried out activities to build capacity of sustainable development of students and teachers, covering more than 400 young teachers and 5,000 students, to enhance awareness, recognition and international perspective of the SDGs among teachers and students in counties and townships .

SDGs and our lives: marching together towards a sustainable future

Ensuring inclusive and equitable quality education is an important part of SDG 4. In order to promote the development of community education, Muyuan Education Foundation, together with UNDP, China International Center for Economic and Technical Exchanges, and People's Government of Neixiang County, conducted a children-oriented SDGs workshop at local village primary schools in Neixiang on

June 15, 2022. In the workshop, teachers explained and shared specific SDGs such as climate change, clean water and sanitation, and drew pictures with children. This activity helps to bridge the gap between urban and rural education, improve the international perspective and comprehensive quality of children in the county, and bring new ideas and vitality to the children in the county and their school, family and community, together marching towards a sustainable future!



SDGs workshop

Qin Yinglin, Chairman of Muyuan, donated 1 billion yuan to support Henan Agricultural University

On July 6, 2022, Qin Yinglin, Chairman of Muyuan, donated 1 billion yuan to Henan Agricultural University to build the HAU-Muyuan Joint Livestock Industry Research Institute, which will be used to enhance the development of the whole pig industry chain, promote information technology, artificial intelligence and industrial Internet development of the upstream and downstream of pork industry chain, and help develop Henan Agricultural University into a world-class agricultural university.



Qin Yinglin, Chairman of Muyuan, donated 1 billion yuan to Henan Agricultural University

Volunteer Services

Muyuan has established a volunteer team to recruit employees and college students to actively participate in volunteer activities and serve and contribute to society. Up to 2022, Muyuan volunteer team had 9,702 registered employee volunteers. They have conducted services in 23 provinces in China with 53,361 hours of volunteer public welfare service.

Activities of Double Ninth Festival

On the Double Ninth Festival of 2022, the Muyuan trade union visited the Fuxing nursing home in Mashankou town, Neixiang county, as well as the Jutan nursing home, to deliver daily necessaries and gifts to the residents, also to get to know their physical, food, clothing, housing, transportation and other conditions, and celebrated the Double Ninth Festival with them.



Organizing Voluntary Blood Donation Activities to Actively Fulfill Social Responsibilities

In order to promote the spirit of selfless dedication and being ready to help others, we make active arrangements for employees to take part in voluntary blood donation activities. In 2022, a total of 462 employees donated blood, which led to the donation of about 172,900 mL of blood in total. Gao Zhifei, an employee of the Company, was awarded as an Advanced Individual in blood donation in Nanyang City for his participation in blood donation for three consecutive years.

MUYUAN牧原

Muyuan employees talked closely with the elderly



Performance Report

Financial performance

	Unit	2022	2021	2020
Operating revenue	1 million yuan	124,826	78,890	56,277
Net profit	1 million yuan	14,933	7,639	30,375
Total assets	1 million yuan	192,948	177,266	122,627
Total output of market pigs	1,000 heads	61,201	40,263	18,115
Dividend payout	1 million yuan	1,488	5,661	1,381

Energy consumption data

Index	Unit	2022	2021	2020
Diesel oil	Liter	81,893,303.65	70,072,490.09	/
Gasoline	Liter	12,061,076.15	18,417,548.36	12,442,810.76
Gas	m ³	218,839,075.60	129,469,790.60	63,557,681.01
Electricity	MW·h	5,142,753.02	4,328,154.29	1,727,664.52
Total energy consumption	Tons of standard coal	1,010,437.76	793,881.24	302,323.91

Greenhouse gas emission data

Accounting scope	2022	2021	2020
Scope 1 Emissions (1,000 tCO2e)	3,894.5	3,076.5	1,496.8
Scope 2 Emissions (1,000 tCO2e)	3,405.6	2,835.4	1,097.0
Carbon emission reduction (1,000 tCO2e)	3,197.2	2,510.6	898.8
Total carbon emissions	410.29	340.13	169.51

Employment situation

Index	Unit	2022	2021	2020
Total number of employees	Person	140,403	137,520	121,995
Total number of males	Person	108,581	104,422	91,358
Male ratio	%	77.34	75.93	74.89
Total number of women	Person	31,822	33,098	30,637
Female ratio	%	22.66	24.07	25.11
Male under 30 years old	Person	34,349	/	/
Male under 30 years old	%	24.46	/	/
Female under 30 years old	Person	10,680	/	/
Female under 30 years old	%	7.61	/	/
Male aged 30-50	Person	67,908	/	/
Male aged 30-50	%	48.37	/	/
Female aged 30-50	Person	21,141	/	/
Female aged 30-50	%	15.06	/	/
Male over 50 years old	Person	6,324	/	/
Male over 50 years old	%	4.5	/	/
Female over 50 years old	Person	1	/	/
Female over 50 years old	%	0.001	/	/

Employment compliance

Index	Unit	2022	2021	2020
Labor contract signing rate	%	100	100	100
Trade union membership rate	%	100	100	100

Local Employment

Index	Unit	2022	2021	2020
Employee's registered residence is in the province where the company operates	Person	120,057	103,002	/
Percentage of local employees	%	85.51	74.9	/

Employee training

Index	Unit	2022	2021	2020
Training expenses	1 million yuan	500	128	/
Per capita training duration	Hour	100	75	/
Training coverage ratio	%	100	100	/

Compliance management

Index	Unit	2022	2021	2020
Contract Compliance Review Rate	%	100	100	100

Occupational health and manufacturing safety training

	Unit	2022	2021	2020
Investment in occupational health and safety training	1,000 yuan	12,532	1,920	/
Number of participants in occupational health and safety training	Person	878,000	749,600	/
Total duration of occupational health and safety training	Hour	43.5	15	/
Investment in manufacturing safety	1,000 yuan	192,360	450,000	/

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ESG Report

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Shenzhen Stock Exchange Guidelines for Self Regulatory Supervision of Listed Companies No. 1 -

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Emissions Management
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Reader Feedback

Dear readers,

Thank you for reading the *ESG Report 2022 of Muyuan Foods Co., Ltd.* In order to provide more valuable information to the Company's stakeholders and further improve its fulfillment of social responsibilities, Muyuan would welcome any feedback or suggestions you might have about the report. Address: Muyuan Foods Co., Ltd., Longsheng Industrial Park, Wolong District, Nanyang City, Henan Province Tel: 0377-65233888

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Multiple choice questions (please tick $\sqrt{}$)

What do you find most satisfying about this report?
 In your opinion, what information you need to know is not involved in this report?

3. Do you have any suggestions for us to compile ESG reports in the future?



serve society
Be upright outside and inside
Advance social development

Create value

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