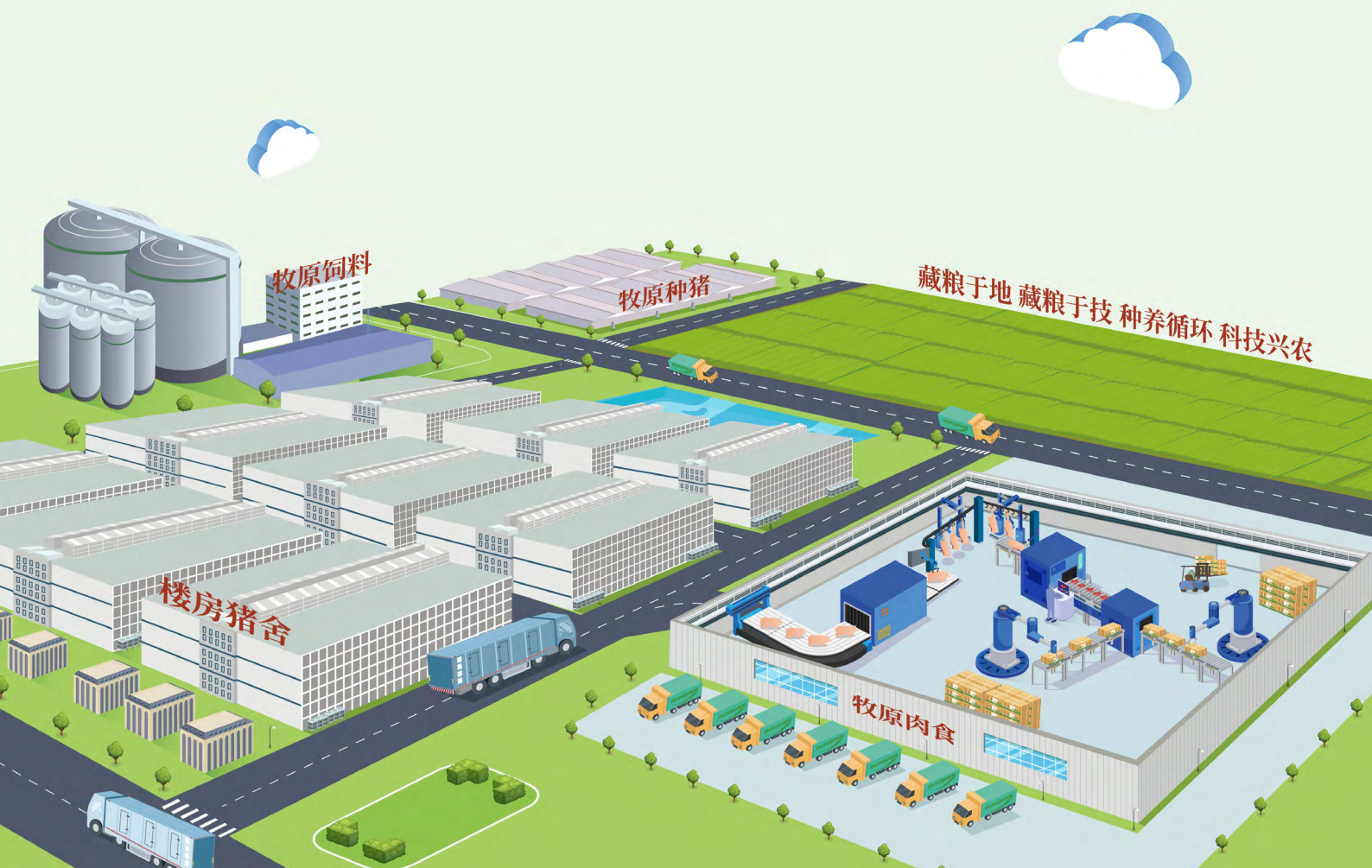


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Muyuan Foods Co., Ltd.

Corporate Social Responsibility Report 2021



ABOUT THE REPORT

Muyuan Foods Co., Ltd. (hereinafter referred to as "Muyuan", "Muyuan Foods", "the Company" or "we") hereby issues this Corporate Social Responsibility Report 2021 to communicate to its stakeholders information concerning Muyuan's policies, measures, actions and achievements towards fulfilling its social responsibilities.

• Scope

Unless otherwise specified, the Report covers Muyuan Foods Co., Ltd. and its subsidiaries, with a reporting period from January 1, 2021 to December 31, 2021. Description in some parts of the Report goes beyond the above period.

• Reference

This 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) issued by the Global Sustainability Standards Board (GSSB), the Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR 4.0) 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 is available in both print and electronic versions. The electronic form can be read and downloaded from CNINFO (www.cninfo.com.cn), a website accredited by the China Securities Regulatory Commission (CSRC) for information disclosure of listed companies. It is also available on the Company's website (www.muyuanfoods.com).

• Notes

All data in the Report have been extracted from internally collected data, public documents, sustainable development cases reported by subsidiaries, and qualitative and quantitative questionnaires prepared for reporting purposes.

Unless otherwise specified, all monetary amounts in the Report are presented in Renminbi (RMB).

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MESSAGE FROM THE CHAIRMAN



Serving people with safe pork to help them enjoy a richer life

2021 was a year full of challenges. The impact of African Swine Fever continued, and the Covid-19 pandemic brought enormous changes, too. Upholding the vision of "serving people with safe pork to help them enjoy a richer life", MUYUAN has adhered to the principle of creating value, regardless of the circumstances. By using modern technology, scientific management, and by other means, MUYUAN has seen improved business efficiency and high-quality development. Thanks to the arduous efforts of 140,000 MUYUAN employees, our pig farming business now covers 219 counties (districts) in 25 provinces (autonomous regions, municipalities). With 40.26 million pigs sold last year and a slaughtering capacity of 16 million pigs, MUYUAN continues to produce high-quality pork for society and contributes to a stable food supply.

Innovation-driven development opening a new chapter of our business

Innovation is the first driving force for development. MUYUAN adopts a "fully independent farming, whole-chain covering, and intelligent operation" production model. Driven by innovative R&D, we have developed 20 advanced technologies in areas including breeding, feed, veterinary, farming, and slaughtering, constantly improving all stages of pig production. Adhering to a market-oriented independent breeding strategy for 20 years, MUYUAN has always been committed to developing pig breeds that better suit Chinese tastes by breaking through industry barriers and breeding restrictions. MUYUAN's Low-protein diet technology has reduced soybean meal consumption and soybean import dependence. Intelligent pig houses have been independently designed and developed to create a healthy environment for pigs to grow healthier. Intelligent slaughtering procedures and whole-chain traceability have been promoted to safeguard pork safety.

Fast development of slaughtering business, promoting industry upgrade

MUYUAN has developed steadily in slaughtering. Up to March 2022, the slaughtering business has developed into 10 provinces (autonomous regions, municipalities), covering 22 counties (districts) of 20 cities, 8 slaughterhouses have been put into operation, with an annual slaughtering capacity of 22 million pigs, selling to 77 cities in 22 provinces. Consequently, MUYUAN has now achieved an integrated whole industry chain layout, with the farming and slaughtering sectors complementing each other to ensure food security. Meanwhile, the transfer of slaughtering and processing plants to pig-farming concentrated areas has smoothed the connection between production and marketing, contributing to the improvement of both pig farming and slaughtering industries.

Combating climate change challenges and protecting nature

The climate (and environmental change) has become a great challenge to the survival and development of human society. 2021 is the first year of the "Dual Carbon" strategy (i.e. peaking carbon emissions by 2030 and achieving carbon neutrality by 2060). In order to respond to the national carbon targets, MUYUAN uses a variety of means such as intelligent technology and green investing to improve resource utilization efficiency and optimize energy use structure, thus reducing the environmental impact of production activities. As a result, these key technologies in 2021 achieved a total emission reduction of 3,341,000 tonnes. MUYUAN promotes energy conservation, emission reduction and circular economy development in pig production. We have saved two-thirds of drinking water and ventilation volume for pigs and pig houses, laid supporting pipeline network covering 3,630,900 mu of farmland, and improved 185,300 mu of saline-alkali soil and 69,400 mu of desert, greatly contributing to a low-carbon and green development.

Helping employees achieve their career goals to promote common prosperity

MUYUAN always sticks to the people-oriented concept to benefit employees. Insisting on people-development before pig-raising, we constantly improve the talent training and selection system to help employees grow and realize life value in a broad career development platform. A fair and effective promotion and reward mechanism has been built to share the benefit of the Company's achievements with employees. We treat employees as family members, take care of their health, strengthen the communication and care within the company, striving to make every employee and their family happy.

Shouldering social responsibility and supporting rural revitalization

MUYUAN is responsible and ready to play its part. In July 2021, torrential rains lashed Henan Province. MUYUAN donated 100 million for flood relief, mass assistance, health and epidemic prevention, and reconstruction of the flood-stricken areas. We explored a poverty alleviation model based on asset income by leveraging our resource advantages and industry-driven capabilities, helping 140,000 households with a population of 390,000 in total. Consolidating its achievements in poverty alleviation, MUYUAN has fully integrated itself into a rural revitalization strategy. Across the industrial chain, from grain, feed, pig farming, slaughtering to processing, it drives the development of logistics and transportation services and realizes the integrated development of the primary, secondary and tertiary industries in rural areas. Meanwhile, MUYUAN takes part in supporting rural revitalization through industrial upgrading. It takes scientific and technological innovation, attracts more outstanding talents to give their best in rural areas, and transforms farmers into professional technical workers, forming a virtuous cycle of talents, land, capital and industry.

2022 is an important year for fully building a modern socialist China. MUYUAN will continue to focus on the principal business of pig farming, actively playing a leading role to make pork production a pillar industry for rural revitalization. Meanwhile, we will increase innovation and improve intelligent production levels to promote high-quality development, supporting China's animal husbandry to become bigger and stronger, contributing to the development of agricultural modernization.

Chairman: Qin Yinglin

Responsibility Strategy and SDGs

Basic Law of Muyuan

I. Business objectives:	Produce healthy foods for society to improve the life quality of the public, helping people enjoy a richer life.
II. Core values:	Create value and serve society; be principled and upright, and advance social development. External value outweighs internal value; long-term interests outweigh immediate interests. Value of humans outweighs value of products; common value outweighs individual value. Social value outweighs profit value; customer value outweighs production value.
III. Business selection:	Create substantial value with our own strengths, excluding nominal profit.
IV. Business principles:	Maximize social value. Never pass on costs, never shirk responsibilities, and never leave hidden dangers. Never harm others. Persist and never waiver in value creation. Never make profits by chance, and never yield to selfish interests. Object to commercial bribery, refuse unearned income, and reject illegal gains. Never engage in speculation, tricking, or dispossession. Never engage in underhand money deals. Be strict in self-discipline, be brave to take up 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 for each employee and each family. Everyone can enjoy a happy life here.
VI. Customer Benefits:	Meet the demands of customers. Never impose whatever you dislike on others, but showing towards others what you yourself would like, is admirable. Always feel for others and treat others with honesty and sincerity. We take customers as brothers and help each other so as to realize fairness, transparency, simplicity, worry-free business transactions, high-efficiency and win-win results.
VII. Social Responsibility:	Put knowledge into action for the benefit of society. Achieve the simultaneous improvement of economical benefits, ecological benefits, and social benefits. We seek to promote an environment-friendly and animal-friendly business pattern, circular economy, and cleaner production with a view to reduce negative influence on the atmosphere, and upgrade the standards of food quality, to improve industrial ecology and promote sustainable development. We keep carrying out public welfare undertakings to support education and promote social and economic development.
VIII. Constant development:	Adhere to corporate values and construct a platform which allows everybody to share in benefits; keep pace with the times and explore the unknown; face challenges with courage and go beyond ourselves; be selfless and make Muyuan long-term sustainable.

Social Responsibility Strategy

Muyuan takes the "Five Commitments" (namely, commitment to food safety, commitment to environmental protection, commitment to employee care, commitment to win-win cooperation, and commitment to public welfare) as the essence of its social responsibility strategy, and actively makes contributions to the realization of UN Sustainable Development Goals (SDGs) by 2030.

Five Commitments	Sustainable Development Goals
<p>Food Safety</p> <p>Muyuan leads the industry by relentless scientific and technological innovation, faithful commitment to antibiotic-free farming, and producing safe, healthy, nutritious and delicious food for society.</p>	
<p>Environmental Protection</p> <p>Sticking to the "Five Steps of Environmental Protection" scheme, Muyuan promotes circular economy and carries out cleaner production, so as to reduce air pollutants and protect ecological environment.</p>	
<p>Win-Win Cooperation</p> <p>With the principle of "helping each other and upholding justice and fairness", Muyuan aims to build a sustainable industrial chain with efficiency and win-win benefits.</p>	
<p>Employee Care</p> <p>Muyuan emphasizes benefiting employees and helping them to develop and realize their life values.</p>	
<p>Public Welfare</p> <p>Sticking to its values, Muyuan aims to build a sharing platform to make continuous progress and stay absolutely focused for long-term growth.</p>	

Muyuan Social Responsibility Indicators

Based on the dimensions of economy, society and environment, Muyuan's social responsibility indicators focus on key points and make adjustment dynamically. In combination with the Company's business and the demands of stakeholders, these indicators will be continuously updated to keep pace with the times and meet the needs of company development. The following table provides explanations for specific indicators.

Sectors	Muyuan's Concerns	Muyuan's Achievements	Disclosure Location
Economy	Compliance of operations	Abide by the laws and regulations, operate business in good faith and in compliance.	Compliance Management
	Corporate governance and transparency	The corporate governance system and operation mechanism have been optimized. In 2021, the Company held a total of 12 board meetings, 11 supervisory board meetings and 6 shareholder meetings.	Corporate Governance
	Building industrial ecology	With the total investment of 35.9 billion yuan, Muyuan cooperates with more than 10,000 partners and has built up industrial clusters.	Building Industrial Clusters to Drive Economic Development
	High-efficiency operation	In 2021, Muyuan had total assets of 177.266 billion yuan, an operating income of 78.89 billion yuan, and a net profit of 7.639 billion yuan.	Company Profile
	Promoting local employment	A total of 103,002 employees have been recruited locally, accounting for 74.9%.	Introducing Talens
	Building honesty and integrity	For the construction of compliance system and incorruptible culture, a total of 110 integrity and honesty training sessions were organized.	Honesty and Integrity
Society	Occupational health and safety	A safety committee was established, through which 149 safety training sessions were conducted. More than 450 million yuan was invested in ensuring staff safety and health. No employee in Muyuan was infected by COVID-19 in 2021.	Health and Safety
	Employee care and respect	Continue to develop the "Employee Happiness Project" and improve employee welfare.	Employee Welfare
	Protection of employees' rights and interests	Insist on diversity and inclusiveness, and improve employee communication mechanism.	Introducing Talens Strengthening Communication
	Employee training and development	Expenditure on employee training exceeded 128 million yuan with 100% training coverage rate. Unimpeded promotion channel and improved promotion mechanism.	Employee Development
	Sustainable supply chain	Insist on responsible procurement, support sustainable soybean procurement, improve the sustainable development ability of partners and help the development of small and medium-sized farmers.	Optimizing Supply Chain Management
	Supply chain management	Strict business partner management mechanism. More than 1,000 small and medium-sized enterprises on the supply chain were empowered, and a total of 7.71 billion yuan of financial resources were integrated. Update Business Partners' Code of Conduct. All business partner have signed the Supplier Honesty & Integrity Agreement. Drive the co-development of industrial chain partners.	Building Industrial Clusters to Drive Economic Development
	Scientific and technological innovation	Totally, Muyuan has applied for 1,636 patents and has 4,632 R&D personnel. In 2021, the R&D investment was 808 million yuan. Set up a scientific research platform and jointly built industrial research institutes with Westlake University and Henan Agricultural University to promote the development of the industry. Established Henan Muyuan Cloud Computing Technology Co., Ltd. and Henan Intelligent Pig Farming Technological Innovation Center.	Topic 1 Technological Innovation Boosts Industry Upgrading
	Animal welfare	Scientific pig raising model integrating precise nutrition, intensive care and intelligent environmental control has ensured the healthy growth of pigs. With reference to Farm Animal Welfare Standards, and other standards, Muyuan has formulated standards for temperature, humidity, ammonia concentration and stocking density, so as to provide a comfortable environment for pigs. Won the "Good Pig Production Award". Humane slaughter has been adopted to reduce the pain of pigs.	Topic 4 Meticulous Care to Ensure Animal Welfare

Sectors	Muyuan's Concerns	Muyuan's Achievements	Disclosure Location
Society	Food safety and quality	Use of rotational two-way breeding system; 13 feed mills got certified for FSSC 22000, and 5 farms achieved GLOBALG.A.P. certification. 40.263 million pigs were sold in 2021, with the whole production process inspected, verified, transparent and traceable. The annual slaughtering capacity reached 16 million heads.	Dedication to Food Safety
	Information security and privacy protection	Protect customers' privacy. A third party has been hired to evaluate the overall risk prevention and control of the Company's information system. Data security training has been carried out covering all staff.	Improving Customers' Experience
	Rural revitalization	Insisting on making our principal business - pig farming - into a pillar industry for local rural revitalization, Muyuan has actively promoted the construction of high-standard farmland, creating more than 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. Muyuan has invested 23.76 million yuan in revitalizing rural culture.	Rural Revitalization
	Co-construction of community	95.56 million yuan was invested to support community infrastructure construction, including building bridges and roads in rural areas, constructing cultural parks and improving infrastructure of schools. These actions have benefited a total of 520,000 households and 1.79 million people.	Rural Revitalization
Environment	Public welfare	Muyuan's "Ju'ai Education Assistance Program" has benefited 201 counties across 24 provinces/regions, sponsoring 43,000 college students, 500,000 primary and secondary school students, and rewarding 25,000 outstanding teachers. Muyuan has built a public welfare platform to facilitate all sectors of society to participate in public welfare philanthropy and create a public welfare ecology. 100 million yuan was donated to provide relief after floods in Henan.	Ju'ai Education Assistance
	Utilization of manure	With manure purification and reuse technology innovation, Muyuan saves 0.45 m ³ fresh water/pig. The waste generated in pig breeding has been treated through a bio-secure anaerobic process, and the biogas generated was used for the site operation as an alternative to electricity.	Cleaner Production
	Circular economy development	Muyuan carried out 8,334 agricultural technology services and trained 272,100 people, covering 3,630,900 mu of field, bringing extra 209.29 yuan/mu for farmers through saved costs or increased gains. In addition, 185,300 mu of saline-alkali land were improved and 69,400 mu of desert land were controlled.	Developing Circular Agriculture
	Biodiversity and land utilization	Insist on 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 by making farms seepage proof, and ensure that the farm construction does not cause biodiversity protection risk.	Developing Circular Agriculture
	Water resource management	Through the innovation of wastewater purification and recycling, the average consumption of water per pig produced could be reduced from 1.84 m ³ /head to 1.05 m ³ /head.	Cleaner Production
	Energy conservation	Build a cleaner production management system. Innovate in energy-saving processes and technology.	Cleaner Production
	Carbon emission reduction	Adopt "advanced oxidation deodorization" technology to control odor. Carbon emission was 1.05 kg CO ₂ -eq/kg pork. Non-heated pig house: Kept warm through heat exchange technology, without fossil fuels burning, further reducing carbon emission.	Topic 3 Promoting Green Operations to Combat Climate Change
	Responding to climate change	Muyuan has actively identified climate change risks and opportunities, incorporated climate change risks into the enterprise risk information database and continued to improve it.	Risks and Opportunities

ABOUT MUYUAN

Company Profile

Muyuan Foods Co., Ltd. was founded in 1992 and is headquartered in Nanyang City, Henan Province. After 29 years of development, it has formed a pork industry chain integrates feed processing, pig breeding, commercial pig farming, slaughtering and processing. Muyuan attaches great importance to innovative research and development. It has established an intelligent breeding cloud platform where big data, artificial intelligence and industrial internet technologies can be applied to the whole process of pork production. In this way, Muyuan is committed to promoting the intelligent upgrading of the pork industry, and realizing unattended operation.

By the end of 2021, Muyuan's business covers 25 provinces (autonomous regions and municipalities). Muyuan owns 275 subsidiaries/sub-subsidiaries, 138,000 employees and total assets of 177.3 billion yuan. 40.263 million pigs were sold in 2021 and the slaughtering capacity was 16 million pigs. Upholding the vision of "serving people with safe pork", Muyuan is committed to producing safe, delicious and healthy high-quality pork through the "fully independent farming, whole-chain covering, and intelligent operation" production model, helping people 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; Making Muyuan a company worthy of respect.

Muyuan Value Formula



Achievements in 2021

	2021	2020	2019
Market pigs produced (10,000 heads)	4,026.3	1,811.5	1,025.33
Slaughtering capacity (10,000 heads)	1,600	400	0
Business income (100 million yuan)	788.90	562.77	202.21
Net profit (100 million yuan)	76.39	303.75	63.36
Total assets (100 million yuan)	1,772.66	1,226.27	528.87
Annual capacity of feed production (10,000 tonnes)	1,935	1,365	726
Number of employees	137,520	121,995	50,319

Corporate Governance

Board Governance

The Company has been improving its corporate governance structure, corporate governance system and operation mechanism in strict accordance with the requirements of relevant laws and regulations, such as the "Company Law", the "Securities Law", the "Code of Corporate Governance for Listed Companies", the "Rules Governing the Listing of Shares on Shenzhen Stock Exchange", the "Guidelines of Shenzhen Stock Exchanges on Self-discipline Regulation of Listed Companies" etc.

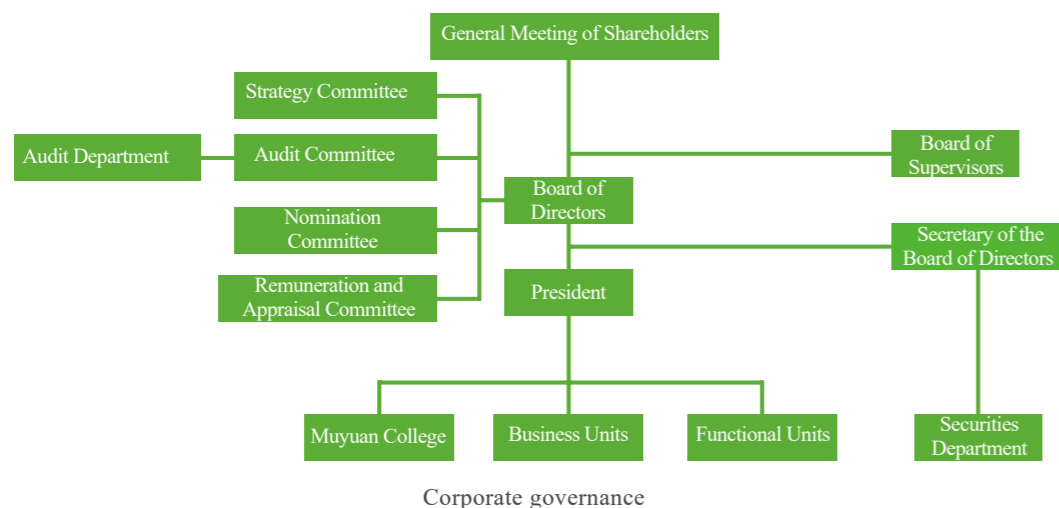
At present, there are seven directors on the Board of Directors of the Company, including three independent directors, accounting for more than one-third of all directors. The composition of the Board of Directors is in compliance with relevant laws and regulations and the requirements of the Articles of Association of the Company. The Company's Board of Directors consists of six male directors and one female director, with diverse professional backgrounds in technology, management, law and finance, who are able to provide professional advice on different aspects of the Company's operation and future development. All directors of the Company carried out their work and performed their duties in strict accordance with relevant regulations. During the reporting period, the Company held 12 board meetings.

At present, there are 4 special committees under the Board of Directors of the Company: the Strategy Committee, Audit Committee, Nomination Committee, Remuneration and Appraisal Committee. They provide professional opinions and suggestions for the scientific decision-making of the Board of Directors, and supervise the Company's risk management.

In 2021, in order to further improve the quality and transparency of the Company's information disclosure and to enable investors and the public to better understand the company situation, upon the proposal of the Audit Committee, BDO China Shu Lun Pan CPAs (LLP) was hired to conduct special verification on the Company's prepayments, affiliated transactions, fixed assets, minority interests, and other items for the accounting period 2018-2020.

Shareholders' General Meeting

In strict accordance with the relevant provisions and requirements, Muyuan has standardized the summoning, convening, discussion and voting procedures of the general meetings of shareholders. Muyuan treats all shareholders equally and by all means facilitates shareholders' participation in the meetings. In 2021, the Company held a total of 6 shareholder meetings.



Compliance Management

A compliance system is an organizational guarantee for corporate compliance. Under the leadership of the Board of Directors, Muyuan has been improving the Company's compliance management and has formed a compliance management system with the business units as its center, safeguarded by the Administrative Department, Legal Department and Audit Department. The compliance management system covers compliance training, compliance assessment, compliance risk prevention and control, violation report investigation and audit inspection, etc. The compliance management system supervises operational aspects including food safety, environmental protection, production safety and land compliance, providing a strong guarantee for the Company's sustainable development.

A compliance regime and process are the institutional guarantee for corporate compliance. Muyuan, in addition to following laws, regulations and standards, has established and improved the compliance management regime and gradually perfected the Company's compliance management. The Company has revised its "Internal Control Management Manual" and "Information Security and Confidentiality System", and optimized the business compliance regime for operations in environmental protection, pig production, quality control and other departments.

Risk Management

To implement and strengthen compliance risk management, Muyuan has established a risk management and control system. It comprehensively and systematically analyzed the compliance risks existing in operation and management activities around key business activities, key steps and key personnel, established risk management systems and procedures, and strengthened the prevention of compliance risks.

Compliance Information Disclosure

Muyuan 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 fulfill its information disclosure obligations, and it discloses the Company's management and affairs with material impact in a true, accurate, complete and timely manner. Muyuan takes the Securities Times, China Securities Journal, Shanghai Securities News, and Securities Daily as its information disclosure media and CNINFO (www.cninfo.com.cn) as its designated website for corporate information disclosure, to ensure that all shareholders of the Company have equal access to the information.

Honesty and Integrity

Muyuan continuously strengthens the integrity and self-discipline system, and has formulated the "Integrity and Self-discipline Management System", "Whistleblower Reward System", "Reporting Handling System", "Integrity Punishment Regulations", "Honesty and Integrity Agreement" and "Joint Handling Mechanism for Muyuan Group Integrity Violations", providing a solid institutional guarantee for the Company's honesty and integrity.

Meanwhile, the Company integrates anti-corruption education into various compliance training sessions. During the reporting period, 110 integrity training sessions were organized, and Integrity Agreements were signed by attendees, with a coverage rate of 100%. The Company organized activities promoting honesty and integrity, such as celebrating International Anti-Corruption Day and visiting integrity education bases. Fifty-one relevant posters, newsfeeds and videos via WeChat Official Account "Integrity Muyuan" and WeCom were released.

International Anti-Corruption Day

In order to improve the legal understanding of all employees, build a strong ideological defence line against corruption and degeneration, and create a culture of integrity and honesty, Muyuan carried out an educational activity with the theme of "Rectifying Corruption and Exercising Integrity" on the International Anti-Corruption Day, December 9, 2021. Professionals from procuratorates and courts, and judicial organs were invited to give lectures to improve employees' awareness of integrity, enhance their ability to resist corruption and jointly create a clean and honest development environment.



International Anti-corruption Day activity

Striking hard to further promote the construction of honesty and integrity

In 2021, Muyuan continued to improve the construction of its integrity and honesty system. It has created a reporting group covering all employees, opened active channels for self-reporting of violations to achieve real-time and direct information reporting, and clarified an incentive scheme for reporting. In this way, it encourages internal and external personnel to whistle-blow against any violations of integrity and the Company's management systems as well as any material business issues.

Whistleblower Protection: The Audit Department keeps the personal information of whistleblowers and the information provided strictly confidential. 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, they can report to the Audit Department immediately. The auditor receiving reports must recuse himself/herself if he/she is a close relative to the person being reported against, or there is an interest between them. Publicity reports and rewards for whistleblowers shall not disclose their names and work units except with their consent. Those who violate the above provisions shall be severely punished. In serious circumstances, they shall be transferred to the judicial authorities for criminal responsibility according to law.

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举报奖励标准

廉洁诚信问题举报，一经查实，查实金额10万以下的全部奖励给举报人，10万以上奖励不低于10万。管理问题举报，经调查属实的，均视情况给予举报人现金奖励1000-100000元。

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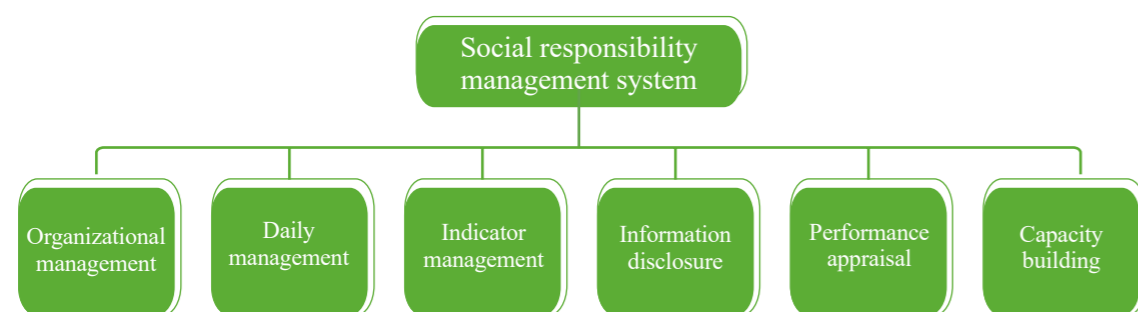
审计部
2021年8月19日

RESPONSIBILITY MANAGEMENT

Social Responsibility Management Framework

To secure the sustainable development and create value for all stakeholders, Muyuan developed a six-branch social responsibility management system that involves decision-making, organizational and operational levels.

A sustainable development working group was set up in Muyuan to work in food safety, environmental protection, employee care, win-win cooperation, and public welfare, so as to fulfill our social responsibilities.



<p>The Board (Decision-making level)</p>	<ul style="list-style-type: none"> To formulate the Company's social responsibility development strategy; To review, adjust and determine major targets and plans for the Company's social responsibility development; To review annual CSR reports.
<p>Sustainable development working group (Organizational level)</p>	<ul style="list-style-type: none"> To make targets and plans for the Company's social responsibility development; To assess and determine the risks and opportunities related to social responsibilities and report to the Board; To organize and establish suitable and effective social responsibility risk management systems; To implement tasks related to sustainable development; To carry out assessments and evaluations on works related to social responsibility.
<p>Subsidiaries and departments (Operational level)</p>	<ul style="list-style-type: none"> To implement works related to the Company's social responsibility; To upgrade the Company's database of social responsibility indicators in accordance with the requirements of the social responsibility management system; To conduct social responsibility training and capacity enhancement.

Materiality Assessment

In order to effectively respond to the concerns of stakeholders and better fulfill social responsibilities, Muyuan identified a set of material issues vital to both itself and its stakeholders through investigations and assessments with internal and external stakeholders. And the assessment results are used as an important basis and reference for preparing the CSR report. Participants in such investigations and assessments include: consumers, shareholders and investors, employees, industry organizations, and value chain partners. In total, 2,431 valid questionnaires were collected.

Materiality Assessment Process

<p>Identify issues</p>	<p>We identified and determined Muyuan's social responsibility issues on the basis of the Company's strategy, the 17 UN SDGs, the concerns of stakeholders, domestic and foreign CSR information disclosure standards, etc.</p>	<p>In 2021, we also reexamined our social responsibility issues and confirmed a list that fully covered our CSR practices.</p>
<p>Determine investigation</p>	<p>The main investigation objects are stakeholders who "are affected by Muyuan" and who "affect Muyuan".</p>	<p>We conducted stakeholder analysis, and adjusted and optimized the category of investigation objects.</p>
<p>Conduct investigations</p>	<p>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 suggestions.</p>	<p>We also learned about stakeholders' concerns and suggestions about our CSR issues through questionnaire, meeting, chat, email, etc.</p>
<p>Plot materiality assessment matrix</p>	<p>We collected the questionnaires and plotted a materiality assessment matrix using the data analysis results.</p>	<p>We analyzed these issues according to the investigation and communication with stakeholders to identify changes in the importance of these issues.</p>
<p>Internal confirmation</p>	<p>The Board reviewed and confirmed the materiality assessment results.</p>	<p>The Board confirmed that there were no significant changes in the materiality assessment matrix of the Company.</p>

Communication with Stakeholders

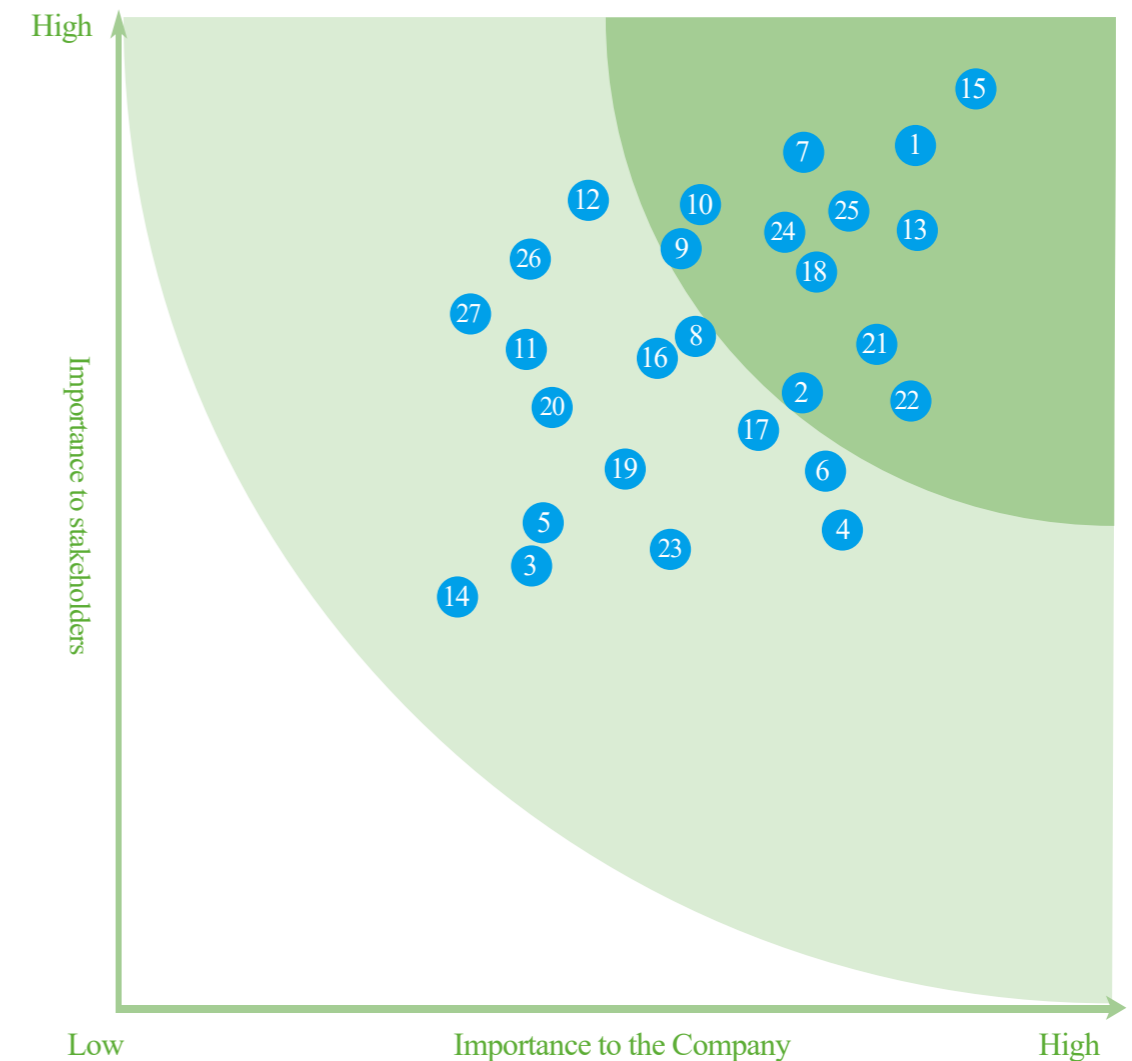
We attach great importance to the communication with stakeholders and continuously expand the communication channels. For this purpose, we have been exploring approaches to better learn about and fully understand the demands and expectations of all parties, especially the criticisms and suggestions on our CSR work, so that we can improve Muyuan's sustainable development and bring mutual benefits to Muyuan and its stakeholders all the more. Key stakeholders of the Company include: the government and regulatory authorities, consumers, shareholders and investors, employees, NGOs/industry organizations/professional institutions, value chain partners, communities, and media/the public.

Stakeholders	Main issues	Communication channels
Government and regulatory authorities	<ul style="list-style-type: none"> Compliance operation with integrity Corporate governance and transparency Utilization of manure Food safety and quality Promoting local employment Industrial ecology construction Rural revitalization Energy conservation and consumption reduction Carbon emission reduction 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Compliance operation with integrity Corporate governance and transparency High-efficiency operation Scientific and technological innovation 	<ul style="list-style-type: none"> General meeting of shareholders Investor survey Performance explanation meeting Roadshow activities Information disclosure Shenzhen Stock Exchange interactive platform (http://irm.cninfo.com.cn)
Consumers	<ul style="list-style-type: none"> Food safety and quality Animal welfare Carbon emission reduction 	<ul style="list-style-type: none"> News reports Social media Follow-up calls Market survey
Employees	<ul style="list-style-type: none"> Occupational health and safety Protection of employees' rights and interests Employee care and respect Employee training and development High-efficiency operation 	<ul style="list-style-type: none"> Workers' congress Communication between employees and the management Employee activities Health lectures WeChat Official Account messages Corporate culture activities Special classes Online communication platform Work meetings Year-end summary and new year plan conference
Value chain partners	<ul style="list-style-type: none"> Supply chain management Customer service Anti-corruption policy Information security and privacy protection Sustainable supply chain Scientific and technological innovation High-efficiency operation Industrial ecology construction 	<ul style="list-style-type: none"> Bidding meeting Business meetings Regular visits Daily communication Honesty & integrity meeting Business partner site audit Business partner training Procurement and sales platform Customer follow-up Market survey Official websites Social media
Community	<ul style="list-style-type: none"> Promoting local employment Utilization of manure Circular economy development Water resource management Public welfare Biodiversity and land utilization Co-construction of community 	<ul style="list-style-type: none"> Field visits and surveys Charitable activities Volunteer services Agricultural technology services Community communication activities Telephone communication Social media Promoting crop-farming and livestock-farming rotation
NGOs/industry organizations/professional institutions	<ul style="list-style-type: none"> Corporate governance and transparency Utilization of manure Circular economy development Food safety and quality Animal welfare Carbon emission reduction Biodiversity and land utilization Water resource management Energy conservation and consumption reduction Responding to climate changes Sustainable supply chain Scientific and technological innovation 	<ul style="list-style-type: none"> Seminars Exchanges and visits Business meetings Industry summits/ forums Charity foundation platforms Email/ telephone communication Association conferences
Media/ the public	<ul style="list-style-type: none"> Compliance operation with integrity Food safety and quality Utilization of manure Circular economy development Rural revitalization Promoting local employment Water resource management Scientific and technological innovation Carbon emission reduction 	<ul style="list-style-type: none"> News reports Social media Official website On-site investigations Information disclosure Charity aids Telephone communication

Muyuan's Material Issues

Economy	Society	Environment
① Compliance operation with integrity	⑦ Occupational health and safety	⑭ Animal welfare
② Corporate governance and transparency	⑧ Employee care and respect	⑮ Food safety and quality
③ Industrial ecology construction	⑨ Protection of employees' rights and interests	⑯ Customer service
④ High-efficiency operation	⑩ Employee training and development	⑰ Information security and privacy protection
⑤ Promoting local employment	⑪ Sustainable supply chain	⑱ Rural revitalization
⑥ Anti-corruption policy	⑫ Supply chain management	⑲ Co-construction of community
	⑬ Scientific and technological innovation	⑳ Public welfare
		㉑ Utilization of manure
		㉒ Circular economy development
		㉓ Biodiversity and land utilization
		㉔ Water resource management
		㉕ Energy conservation and consumption reduction
		㉖ Carbon emission reduction
		㉗ Responding to climate changes

Materiality Assessment Matrix



Topic 1

Technological Innovation Boosts Industry Upgrading

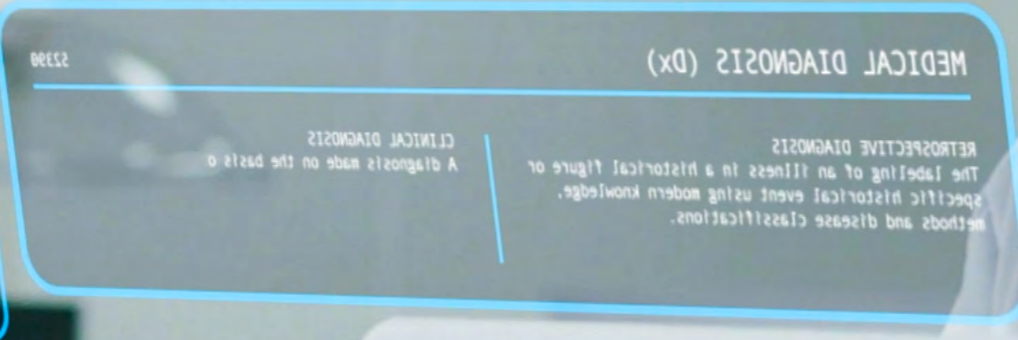
Highlights

In 2021, Muyeuan had 4,632 R&D personnel, invested RMB 808 million in R&D and applied for 575 patents.

It has developed various intelligent products, including systems of intelligent environmental control, intelligent feeding, intelligent pig farming, and intelligent health management and intelligent slaughtering equipment.

China's Ministry of Industry and Information Technology, National Development and Reform Commission, Ministry of Finance, and State Administration for Market Regulation co-released the Undertaker List of Demonstration Factory Cultivation and the List of Outstanding Scenarios for the 2021 Smart Manufacturing, in which Muyeuan's two subsidiaries were included.

The Ministry of Agriculture and Rural Affairs of the PRC co-recognized Muyeuan as one of the Agricultural and Rural Informatization Demonstration Bases for 2021.



Technology Makes Safer Pork

Innovation is the key to industrial upgrading. Muyuan has made unattended production its major direction and continues to carry out scientific and technological innovation. By using big data, 5G, AI and other cutting-edge technologies, Muyuan has developed various intelligent products, such as intelligent environmental control, intelligent feeding, "intelligent pig farming expert" system, intelligent health management system, and intelligent slaughtering. It has made progress in intelligent feeding, farming and slaughtering. With improved production efficiency, Muyuan provides the public with safe and healthy pork products.

Pig houses are where these technologies play their roles. Muyuan's pig houses are equipped with intelligent systems for environmental control and feeding, as well as the "intelligent pig farming expert" system. Apart from production efficiency, food safety and environmental protection have also been improved. In this way, Muyuan has achieved the simultaneous improvement of economic, ecological, and social benefits.

Slaughter technology is a key element for pork quality. Having introduced top-class equipment and adopted cutting-edge technologies, Muyuan safeguards pork quality and supplies customers with assured pork.



Muyuan slaughter house

Intelligent Environmental Control

Air filtration: An air filtration module is added to the air inlet of the pig house. Its high-efficiency filtration reaches MERV 16, close to ICU standard. The fresh air goes through 4 filtrations, which blocks any particle larger than 0.3 microns in diameter, effectively blocking out pathogens and creating a clean environment for pigs.

Independent ventilation: Through intelligent and precise control, in sow barns each sow has separate ventilation, and in fattening barns ventilation is independent between pens, which prevents cross infection, reduces the spread of the diseases and protects pig health.

Sterilization and deodorization: Exhausted air at the air outlet of the pig house is sterilized and deodorized, with 99.9% of the airborne bacteria filtered and killed. No odor can be smelled around the production site, avoiding affecting nearby residents' life.

Muyuan's pig buildings are equipped with intelligent environmental control devices that collect temperature, humidity and airspeed data. Based on IoT technology, it can real-time monitor the whole production process and control of fans, sprinklers, air-inlets, heating lamps, etc. to create a comfortable and healthy environment for pigs.

Intelligent feeding

An intelligent feeding system has been applied in farms, which collects information such as feed intake and water consumption, adjusts feed formula according to pig growth curves and health updates, and automatically gives water and feed.

"Intelligent pig farming expert" system

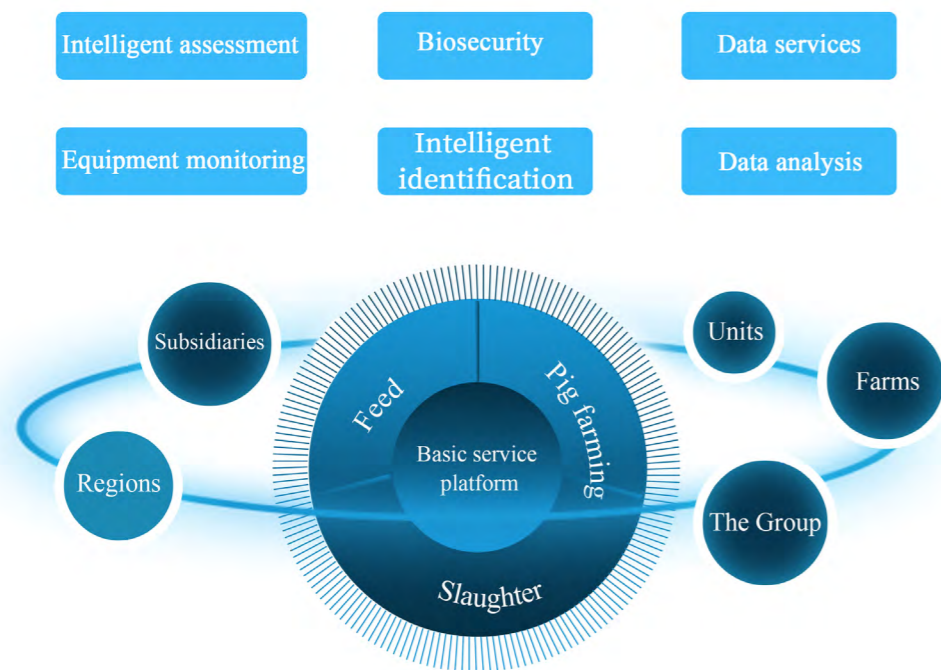
Integrated with multi-sensors to monitor temperature, humidity, carbon dioxide concentration and lying posture, the system makes possible remote monitoring, real-time diagnosis and alarm, and coordinates with other robotic equipment.

Technology Creates More Efficient Management

Through big data, cloud computing, AI and other technologies, Muyuan has transformed its business model and built the Muyuan IoT platform for use of three major IoT application scenarios: feed processing, pig farming production and slaughtering. With data shared across the whole business chain, the platform comprehensively covers the Company following a five-level structure: the Group-region-subsiary-farm-unit, integrates business data and authorization, and realizes targeted intelligent management. On top of equipment monitoring, intelligent identification, report analysis, intelligent evaluation, biosecurity, and data services, the platform can be developed to serve the operation and production in new ways, thus realizing precise production management and intelligent decision-making.



Muyuan intelligent farming cloud platform



IoT Platform: to realize full business coverage and whole industrial chain management

Technology Makes Production Easier

In 2021, we attached specific emphasis on promoting the intelligent application in feed, farming, and slaughtering business, and strove to free employees from heavy and repetitive work through technological innovation. This has improved production efficiency and made production easier and safer.

On February 14, 2022, China's Ministry of Industry and Information Technology, National Development and Reform Commission, Ministry of Finance as well as State Administration for Market Regulation have recognized Muyuan (Wanrong) as one of the "2021 Smart Manufacturing Demonstration Factories".

Item	Achievement	Illustration
Intelligent feed production system	It calculates feed demands and arranges feed production based on real-time data of available feed in bulk bins and daily feed demands. In this way, production is completely demand-driven, from raw materials to processed feed. Automatic technologies are used on operations like sampling of raw grain and weighing, and equipment like hydraulic dump trucks are used to free our employees from heavy work.	

Item	Achievement	Illustration
Under-floor manure remover	By removing manure under the slatted floor, it reduces risk of accidents, shortens the manure cleaning cycle, and reduces electricity and water consumption while improving labor efficiency.	
3D weight estimation device	The built-in 3D imaging and intelligent algorithm system can generate weighing results by taking pictures of pigs. It is portable and convenient, and can be operated by a single person, in any pig weighing scene.	
Cleaning robot (scrubber)	These scrubbers improve the cleaning efficiency, reduce water consumption, and lower human labor intensity for pen cleaning.	
Intelligent logistics in slaughtering and processing	Belt conveyors, machine arms, transfer vehicles and other intelligent equipment are used in logistics to reduce the labor intensity of our employees.	
Intelligent by-product processing	In the processing of by-products, automatic equipment for dipping carcass into rosin and removal rosin from the carcass, pre-cooling red offal, precooking and cooling large intestine, and assessing pig trotters are applied to improve by-product yield and quality, and improve production efficiency.	

Gathering R&D Talents

Industrial upgrading needs the support of interdisciplinary talents. MUYUAN now has 4,632 R&D talents graduated from leading colleges and scientific research institutions, including Tsinghua University, the Chinese University of Hong Kong, the George Washington University, Carnegie Mellon University, etc. Their R&D interests cover various areas including animal husbandry, veterinary, breeding, nutrition, informatization and intelligence.

In 2021, MUYUAN applied for 575 patents, invested 808 million yuan in R&D, and made significant progress in genetical breeding, feed and nutrition, disease prevention and control, intelligent pig farming and slaughtering. As of April 2022, MUYUAN had undertaken 3 National Key Special Projects, won 4 Henan Provincial Science and Technology Progress Awards, applied for 1,636 utility model patents, design patents and invention patents.

In order to support R&D, MUYUAN designated June 22 as its internal Yangzhu Festival (i.e. Pig Farming Festival), set up billions of yuan as innovation project bonus to award innovation leaders and teams who have made outstanding achievements so as to inspire more ground-breaking innovations, promote useful innovation, and contribute to boost industry progress.



Smart Environmental Control Award in 2021 Pig Farming Festival



Slaughter Innovation A ward in 2021 Pig Farming Festival



MUYUAN won Science & Technology Progress Award in Henan Province

Building a research platform to boost industry upgrading

On December 16, 2021, Henan MUYUAN Cloud Computing Technology Co., Ltd., a wholly-owned subsidiary of MUYUAN, was established. This subsidiary is dedicated to R&D in big data, AI, intelligent robot, cloud computing, and 5G communication services. It is established to realize information-based monitoring, analysis and management throughout the pig production chain, providing a support platform for promoting the digitization and high-quality development of the industry.

In 2021, the Company took the lead in cooperating with other entities to establish Henan Intelligent Pig Farming Technological Innovation Center. By cooperating with colleges, as well as Huawei, Alibaba, and the three Chinese telecommunication operators, the Center is dedicated to the digital and intelligent upgrading of traditional animal farming industry.

MUYUAN actively carries out college-enterprise cooperation with Westlake University, Henan Agricultural University and others. Institutes have been established to conduct cooperation in prospective studies of intelligent pig farming, environmental protection, diseases prevention and control, and nutrition R&D, boosting the transformation and upgrading of the industry to achieve sustainable development.



MUYUAN and Henan Agricultural University jointly set up the United Industrial Research Institute



MUYUAN and Westlake University jointly set up a joint research institute

Honors

On September 28, 2021, the Ministry of Agriculture and Rural Affairs issued a notice on identifying the 2021 agricultural and rural informatization demonstration bases. After the recommendation, formal review and expert review, MUYUAN was recognized as the "2021 Agricultural and Rural Informatization Demonstration Base".





Topic 2

Industrial Chain Extension and Rapid Development of Slaughtering Business

Highlights

By the end of March 2022, Muyuan's slaughtering business had been extended to cover 10 provinces / autonomous regions, including 22 counties in 20 cities, with an established annual slaughtering capacity of 22 million pigs.

Muyuan supplies a full range of high-quality pork products, selling to 77 cities in 22 provinces / autonomous regions.

All pigs slaughtered by Muyuan Meat are raised by Muyuan itself with feed produced in Muyuan. Quality control is implemented throughout the production from raw feed to pork cuts, ensuring food safety.

Among the subsidiaries, Neixiang Muyuan Meat and Zhengyang Muyuan Meat have obtained the certifications of ISO 9001 quality management system and the HACCP management system. Neixiang Muyuan Meat has also obtained the filing certificate as an enterprise qualified to export foods.



Rapid Development of Slaughtering Business

Muyuan actively responds to the national policy of moving pig slaughtering and processing plants to areas with centralized pig farming. Muyuan is extending its industrial chain and steadily developing its slaughtering business so that the farming and slaughtering facilities are matched and at close distance, which promote the transformation of "transporting pigs" to "transporting meat", realize the matching of breeding and slaughtering, smoothly connect production and marketing, and boost the high-quality development of the pork industry.

By March 2022, Muyuan's slaughtering business had been developed in 10 provinces/autonomous regions, covering 22 counties in 20 cities, with 22 subsidiaries established and an annual slaughtering capacity of 22 million pigs. Muyuan has developed more than 200 pork products and distributes these products with a stable supply in 77 cities in 22 provinces/autonomous regions.



Muyuan slaughter business layout

Producing High-Quality Pork: Safe, Delicious and Wholesome

Devoted to serving people with good pork and thus helping them enjoy a richer life, Muyuan always bears in mind its mission of "producing safe and wholesome pork for the public" and insists on a production mode which is "fully independent-farming, whole-chain covering, and intelligent operation".

Safety

- **Safeguarding across the whole industrial chain:** All slaughtered pigs are raised in Muyuan-owned farms using feed produced in Muyuan. Quality control is implemented throughout the production from raw feed to pork cuts, ensuring food safety.
- **Safety tracing:** Farms and slaughterhouses share their data, so that all processed products can be traced back to their original batch in the farm. Traceability drills are carried out regularly to ensure the product traceability system is sound and effective.
- **Slaughtering management:** Muyuan Meat has established its quality management system, identified food safety risks, and attached great importance to controlling any potential food safety hazard through standardized operating procedures.
- **Safety certification:** Among the subsidiaries, Neixiang Muyuan Meat and Zhengyang Muyuan Meat have passed the certifications of ISO 9001 Quality Management System and the HACCP Management System. Neixiang Muyuan Meat has also obtained the filling certificate to export its products.
- **Technical support:** In the process of pre-cooling, staged cooling technology is applied to meet the requirements of different stages to minimize loss of nutrients and inhibit microbial growth.

Good flavor

- **Value-orientated breeding:** Good breeds make good hogs, and good hogs make good pork. With independent breeding for more than 20 years, Muyuan has established a professional breeding team. The team takes consumer demand as its orientation and works to provide high-quality pork with clear layers, high lean meat percentage and good flavor.

Wholesomeness

- **Healthy farming:** Through precise nutrition formula, intelligent feeding and water ultrafiltration, our new intelligent pig house management system and intelligent environmental control system provide comfortable environment for pigs.
- **Meticulous care:** We carry out training to increase knowledge and skills related to pig farming, veterinary medicine, intelligent technology application, animal welfare, etc. to help employees better care for pigs and ensure the healthy growth of pigs.

Muyuan is one of the first pilot enterprises with whole-chain digital certification for livestock and poultry products

To better meet people's needs in pursuit of a healthy life, to protect consumer rights and promote the transformation and upgrading of the livestock industry, China Animal Agriculture Association and China Quality Certification Center jointly selected pilot demonstration enterprises for whole-chain digital certification for livestock and poultry products in August 2021, where Muyuan was among the first batch of demonstration enterprises.

In the future, Muyuan will actively take part in bringing out high-quality livestock product standards and whole-chain data security integration specifications, establishing mutual trust mechanisms for digital certification and recognition of the whole industrial chain of production, supply and marketing.



Serving Customers Wholeheartedly to Gain Recognition and Trust

Muyuan not only provides customers with high-quality products, but also provides customized services with a dedicated service team, so as to improve customers' cooperation experience and create greater value for customers. In September 2021, Muyuan Meat Co., Ltd. was awarded the "2021 China Advanced Enterprise in Meat and Food Industry".

<p>Sufficient supply with good quality</p> <p>Stable, sufficient, high-quality pig supply</p>	<p>Cold chain logistics</p> <p>Cold chain solution is used in the whole transportation process, with temperature between 0 and 4°C to ensure the freshness and quality of the products. Trucks are equipped with temperature control devices and GPS system</p>	<p>Customized services</p> <p>Customized products that meet product standards</p>	<p>Dedicated support teams</p> <p>Dedicated teams to give timely solutions for clients</p>
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Customer voice

Muyuan pork has good color and quality. Muyuan is responsible and trustworthy.

-- Consumer from Beijing

Customer voice

Muyuan Company provides thoughtful service, timely quotations every week, sufficient and accurate market estimates, and good delivery time and quality.

-- Procurement director of Anhui Qingsong Food

Cooperation partners

Muyuan Meat is in cooperation with nearly 10,000 clients. It is highly praised by clients such as Hormel, Haidilao, Yonghui Superstores, FreshHippo, and Dingdong Maicai, and has built in-depth strategic cooperation with them.



*Logos are presented in alphabetical order.



Enhancing the value of by-products for human health

Our slaughter business has enabled us to provide some of our by-products to pharmaceutical companies for producing human medicines. For example, porcine small intestinal mucosa can be used to produce heparin sodium, an anticoagulant drug used to slow the formation of blood clots, commonly used after surgery or in dialysis, blood transfusions, medical device implants and other applications.

We are proud that our business can exert more value than pork itself, and this has become a strong motivation for us. We sell pig by-products as raw materials to Hepalink Pharmaceutical, Tiandong Pharmaceutical, Chase Sun Pharmaceutical, Wanbang Biopharmaceuticals and other pharmaceutical enterprises, to support the production of heparin sodium, Guanxinshu (for treating coronary heart disease), insulin and other drugs.

Topic 3

Promoting Green Operations to Combat Climate Change

Highlights

In 2021, Muyuan set up a Cleaner Production Management Team under the Sustainable Development Working Group to promote the Company's carbon emission reduction.

According to the internal carbon inventory conducted in 2021, Muyuan's GHG (Greenhouse Gas) emission from activities including feed processing, pig farming, slaughtering and processing was 1.05 kg CO₂-eq/ kg pork.

On January 15, 2022, Muyuan participated in the inaugural meeting of the National Science and Technology Innovation Alliance of Agricultural and Rural Carbon Peak and Carbon Neutrality and was elected as a standing director organization.



Constant Efforts in Promoting Green Operations

Muyuan is deeply aware of the impact of climate warming on human society. Since its establishment, Muyuan has always adhered to an environment-friendly business model, continuously explored environmental protection innovations and technologies such as low-protein diets, non-heated pig houses, and manure utilization. By constantly promoting energy conservation and emission reduction, Muyuan has committed itself to the green and sustainable development of the pork industry.



Carbon Inventorying and Accounting

Sticking to its green development ambition, Muyuan has set up a Cleaner Production Team and further strengthened low-carbon operations. In accordance with the ISO-14064 Standard and the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, the Company has conducted accounting for feed processing, pig farming, slaughtering and processing and other processes to improve the carbon accounting system and accurately inventory the carbon emissions under Scope 1 and Scope 2. In 2021, the GHG emission from enteric fermentation, manure management and energy consumption was 1.05^①

kg carbon dioxide equivalent per kg of pork (kg CO₂-eq/kg pork).per kg of pork (kg CO₂-eq/kg pork).

Muyuan is determined to develop in a green and low-carbon manner. On the basis of carbon emission accounting, Muyuan will formulate appropriate plans to reduce GHG emissions generated by the operation to support China's green development.

Plan for Carbon Resource Management

Targets		Actions
2021	Accounting by using the total GHG emission of Muyuan in 2021 as the baseline for future plans	Before 2030, lay emphasis on carbon reduction technologies while increasing investment in negative carbon and zero carbon research. After 2030, focus on promoting zero carbon technologies <ul style="list-style-type: none"> • Work on both carbon offset and carbon emission reduction • 2021 carbon emissions by business segment: <ul style="list-style-type: none"> - Feed processing: 407,800 tonnes - Pig farming: 2,951,600 tonnes - Slaughtering and processing: 30,200 tonnes
2025	Reduced emission intensity generated from feed processing, pig farming and slaughtering	By 2025: <ul style="list-style-type: none"> • Carbon emission intensity is reduced by 2.5% per pig (including emission from feed processing, pig farming, and slaughtering) • 76,440,000 m³ gas use to be substituted by biogas • To increase distributed PV installed capacity to 50 MW • Biogas power generator installed capacity of 10 MW • Further optimize energy structure, reduce use of fossil fuel • To increase manure-fertilized farmland area to 4.62 million mu
2030	Reducing carbon emissions created by the whole business chain	By 2030, we hope to manage the carbon emission throughout the pork production chain. <ul style="list-style-type: none"> • 11,520,000 m³ gas use to be substituted by biogas • To increase distributed PV installed capacity to 10 GW • To raise manure utilization rate, substituting 50+% chemical fertilizer • Recycle straw to decrease GHG emission from crop fields • Launch Muyuan Carbon Management Platform • Conduct carbon accounting of individual employees to encourage emission reduction
2050	Sustainable development	We hope that the global temperature rise will be limited to 1.5°C by joint efforts <ul style="list-style-type: none"> • Continue to exercise energy saving, carbon reduction and carbon fixation practices, reaching our full potential in carbon emission reduction • Provide carbon carbon reduction services for enterprises along the same industrial chain and promote carbon reduction along the supply chain. • Explore ESG financial investment and support low-carbon industrial upgrade

① Compared with 2020, in 2021 we optimized the use of default values for the characteristic factors in the calculation of GHG emissions, expanded the GHG accounting boundary, and took GHG emissions from feed production and pig slaughtering/processing into account.

Our Key Actions

We have identified action measures from three aspects - carbon reduction, carbon negative, and zero carbon^②. This includes low-protein diet, heat exchange system, sterilization and deodorization system, biogas utilization, soil carbon sequestration, energy conservation, and solar photovoltaic power generation.

Carbon Reduction

Six measures to reduce carbon emissions	
	Application of low-protein diets
	Biogas utilization
	Sterilization and deodorization system
	Improving energy efficiency through intelligence
	Promoting cleaner logistics
	Exercising green office practices

Measure 1: Application of low-protein diets

Muyuan has been implementing low-protein diets since 2000, with soybean meal accounting for 9.8% of the feed. According to the Ministry of Agriculture and Rural Affairs of the People's Republic of China (MARA), average protein content in feed is 15.7% in China, with soybean meal accounting for about 17.7% in feed. Using low-protein diets reduces the nitrogen in the feed effectively, so as to reduce the nitrous oxide emission from manure management. As a result, nitrogen emission has been reduced by 1.5 kg per pig, equivalent to an emission reduction of 60,600 tonnes. In 2021, protein usage saw a drop of 378,600 tonnes, equivalent to an GHG emission reduction of 111,100 tonnes of CO₂-eq, saving a total of ~1,081,700 tonnes of soybeans and 8,320,500 mu of farmland.

^② Carbon reduction: reduce GHG emissions; Carbon negative: absorb and fix GHG from the air; Zero carbon: no GHG emissions.

Measure 2: Biogas utilization

Muyuan has adopted anaerobic fermentation for manure treatment to generate biogas, which is then used to replace natural gas and electricity. Meanwhile, Muyuan has installed an extended amount of biogas utilization facilities and upgraded biogas operation facilities. Through using biogas for power generation and heating, a reduction of 1,453,100 tonnes of CO₂ emission was achieved in 2021, equivalent to the total annual CO₂ emission of 519,000 vehicles.



On-site biogas power generation facilities

Measure 3: Sterilization and deodorization system

Muyuan has innovatively developed a sterilization and deodorization system to manage the exhausted gas from farms, which removes 97.3% of ammonia, 100% of hydrogen sulfide, and 99.98% of dust. In 2021 alone, the GHG gas emission reduction was equivalent to 96,400 tonnes of carbon dioxide, an amount that takes 5.20 million trees to absorb.



On-site deodorization and sterilization system

Measure 4: Improving energy efficiency through intelligence technologies

To save energy and improve energy efficiency, we have made a targeted technical and management scheme for power use under various scenarios.

By using the intelligent pig farming system, electrical facilities in pig houses can be controlled in an intelligent way, thus reducing power consumption while ensuring the growth and health of pigs.

Based on factors such as the people and weather, the energy-saving situation of the office is actively monitored through digital technology, and the use of high-energy-consuming electrical equipment such as lights and air conditioners is overseen.

Measure 5: Cleaner Logistics

Muyuan uses new-energy vehicles for short-to-medium distance transportation.

We have standardized the transport arrangement for business trips and encouraged employees to form a habit of low-carbon traveling.

Supporting facilities for new-energy vehicles have been built and improved, encouraging employees to travel by new-energy vehicles.



Charging piles for electric vehicles in Muyuan



Site shuttle bus

Measure 6: Green lifestyle and workplace initiatives

Employees are encouraged to live and work in a low-carbon style to reduce GHG emissions.

Muyuan's Proposal

— What can we do to protect clear waters and green mountains?

Daily Life

1. Use less disposable products.
2. Save water and electricity.
3. Protect animals and refuse game meat.

Travel

1. Cycle or walk when making short journeys.
2. Try to use public transportation for short-distance travel.
3. Service vehicles regularly to ensure exhaust emissions meet the standards.

Work

1. Reduce the energy consumption of office equipment, use electrical appliances reasonably, and turn off lights and air conditioners when leaving the office.
2. Implement paperless office, set up "green recycling stations", and reasonably purchase and use office supplies.
3. Take care of office equipment and extend the service life.

Carbon Negative

Increase soil organic matters and improve soil carbon sequestration capacity

Applying manure and biogas slurry instead of chemical fertilizers accumulates organic matter in the field, increases soil fertility, and improves soil structure and carbon storage potential.



Muyuan's agricultural supportive pipeline network

Expand desertification control and saline-alkali land improvement

Planting trees in the desert areas near our farms increases soil organic matter and improves soil capacity of water retention and carbon sequestration. And these trees can also absorb carbon.

The Company improves saline-alkali land by applying biogas slurry to increase the arable area, and adopts such farming techniques as no-tillage, crop rotation and use of cover crops to reduce soil damage, which will help avoid nitrogen depletion, reduce water and soil losses and control weeds, pests and diseases.



Saline-alkali soil improvement in Da'an, Jilin province

Zero Carbon

Using renewable energy for production activities

Through distributed photovoltaic power generation systems installed on the roofs of pig houses and slaughterhouses, we have optimized the structure of energy use and enhanced green development. Now, the first independently-developed Muyuan PV power generation project has been put into operation in Muyuan Meat (Neixiang), producing about 5.91 million kWh per year (equivalent to burning 1,970 tonnes of standard coal). Apart from that, the Company expects an installed capacity of 50 MW from distributed PV power generation projects in 2022. Once completed, 50 million kWh will be generated per year, equivalent to burning 16,700 tonnes of coal, reducing CO₂ equivalent emissions by 29,100 tonnes.



Distributed PV project in Muyuan Meat

Sustainable supply chain

The proportion of sustainable material procurement in the production and operations is increased to create a sustainable supply chain.

Communication and Cooperation

Muyuan's participation in the National Science and Technology Innovation Alliance of Agricultural and Rural Carbon Peak and Carbon Neutrality

On January 15, 2022, the National Science and Technology Innovation Alliance of Agricultural and Rural Carbon Peak and Carbon Neutrality ("the Alliance") was founded in Beijing. Muyuan attended the assembly and was elected as a standing director organization. As one of the "National Agricultural Science & Technology Innovation Alliances", its participants include various agricultural R&D institutions, colleges, technology promotion companies and technological innovation-based enterprises. It aims to tackle the major and key issues and bottlenecks in China's agricultural and rural carbon issues, and to strengthen cooperation in terms of the dual carbon goals, industrial-technological innovation and application. As an unincorporated organization that values the public good, serving society, and academic development, the Alliance also makes efforts in collaborative scientific innovation, demonstration of new technology and sharing achievements in agricultural and rural carbon emission reduction and carbon sequestration.

In the future, Muyuan will actively carry out external exchanges and cooperation on the development of CCER (Chinese Certified Emission Reduction) methodology, product carbon footprint accounting and carbon label management, low-carbon demonstration project and other aspects, promoting innovation and help achieve green development of China.



Close communication between Muyuan and CDP

Muyuan maintains close communication with CDP, MSCI, FAIRR and other institutions and organizations to continuously improve sustainable development and contribute to mitigating the impact of climate change.

The CDP Worldwide Group delegation visited Muyuan in November 2021. CDP and Muyuan had friendly communication on topics such as the CDP climate questionnaire, the Science-Based Targets Initiative (SBTi), and Muyuan's 2021 questionnaire. In 2022, Muyuan will continue to fill out the CDP questionnaires, strengthen carbon information disclosure, and contribute to promoting sustainable development.



Face-to-face communication between Muyuan and CDP



Topic 4

Meticulous Care to Ensure Animal Welfare

Highlights

A dynamic nutrition model has been established to achieve precise nutrition.

High-temperature prolonged sterilization process is adopted in feed production, and water is ultrafiltered and distributed through an intelligent feeding system, so that our pigs eat and drink well.

Pig houses provide sufficient space for activities and the herd structure is stable. Muyuan has established standards for pig house comfort levels and uses an intelligent environmental control system for pigs to grow up happily in a comfortable environment.

The intelligent pig farming expert system monitors pigs in real-time, identifies abnormalities and sets off alarm to ensure that pigs get timely and professional care to stay healthy.

Pig transfer and pre-slaughter rest are carefully managed, and all slaughterhouses use the CO₂ stunning technology. Muyuan respects life and uses humane slaughter.

Muyuan won the "Good Pig Production Award".



We advocate scientific pig farming and improve pig welfare by providing pigs with the food, water, comfortable housing, disease prevention, meticulous care and management needed to maintain good health and energy. We are committed to making pigs free from hunger and thirst, illness and disease, pain and fear, and enjoy comfortable environment and express their nature freely. Every employee takes pride in safeguarding animal welfare.

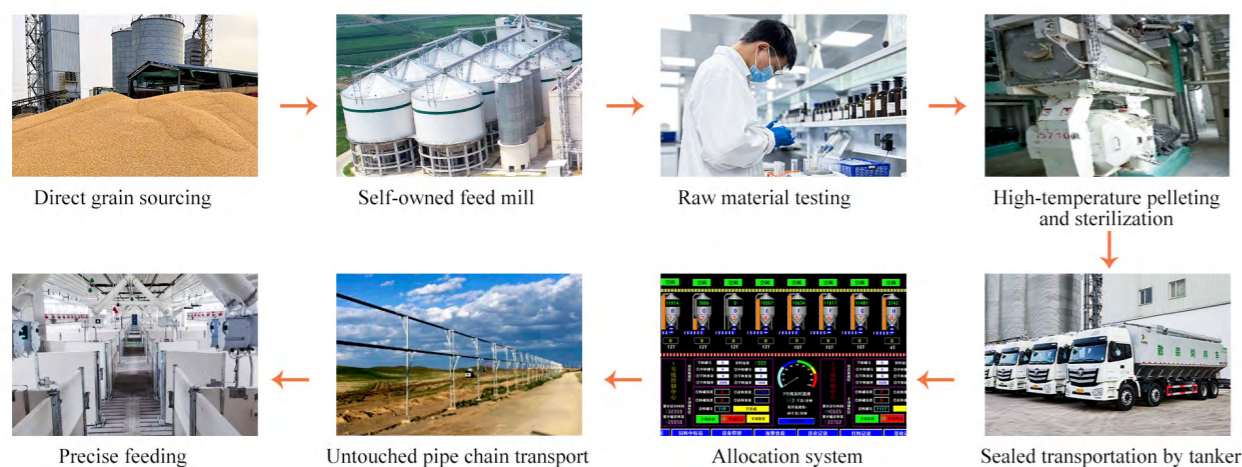
Scientific Nutrition for Good Feed

Precise nutrition formula

Based on the consumption of net energy and true digestible amino acid, MUYUAN has developed dynamic nutrition models using the factorial method, providing optimal nutrition for herds.

Safe and palatable feed

High-temperature prolonged sterilization technology is applied in the feed production. Temperature is monitored in real time to ensure the sterilization effect. The whole transportation process from feed mills to farms is airtight. Farms are equipped with smart-operated pipelines for feed transportation to minimize biosafety risk and ensure feed safety. By using expanded corn and soybeans, feed is made palatable to pig taste.



Intelligent feeding

The intelligent feeding system is applied to collect information such as feed intake and water consumption, adjust the feed formula according to the growth curve of the pig herd and the health status of the pigs, and precisely supply feed and water. It also enables pigs in a pen to eat at the same time, avoiding stress.



Intelligent equipment in pig barns

Water source ultrafiltration

Farms are equipped with water source ultrafiltration system, which follows the treatment process of "flocculent deposit - rough filtration - ultrafiltration". With the 50nm filters, 99.99% of pathogenic bacteria can be removed, and the bacteria transmission through water can be cut off, thus ensuring the safety of the drinking water of the herds.

Good Environment to Make Pigs Grow well

Well-chosen sites

For farms, we chose the sites that are located in good surroundings and far away from cities to effectively avoid biosecurity risks. The sites should also have abundant water supply and good ventilation, for pigs to enjoy nature.

When make plans for pig houses, factors related to animal welfare are considered, such as number, age, weight, feeding and drinking space for the future pigs. The pig houses use insulation materials to keep warm in winter and cool in summer. We always ensure that the equipment and materials used in farms will not cause harm to animals.



MUYUAN pig farms in Fugou

Sufficient space

Referring to the Farm Animal Welfare Requirements: Pigs and the GLOBAL G.A.P. standards, we set up Muyuan standards for raising density to ensure that each pig gets enough space. We provide pigs with enrichment materials for chewing, rooting, and tossing, allowing them to act out their natural behaviors freely.

The Company ensures that the structure of pig community in each pig house is stable and that pigs have many companions to meet their social needs.

Comparison of lying area under different standards			
Pig group / weight (kg)	Muyuan standard (m ² / animal)	CAS (China Association for Standardization) standard (m ² / animal)	GLOBAL G.A.P. standard (m ² / animal)
< 20	0.37	0.2	0.15-0.2
20-50	0.37-0.8	0.4	0.2-0.4
50-80	0.8	0.6	0.55
80-110	0.8	0.8	0.65
Sows	1.76	1.5	
1-parity gilts	1.76	1.2	

Comfortable environment

Muyuan has developed an air conditioned intelligent pig house with an air filtration module in the air inlet. The fresh air is filtered through 4 layers, which effectively blocks the airborne transmission of pathogens and creates a clean environment for the herds. Through intelligent and precise control, each pig pen receives independent ventilation, which benefits pig health. The air outlet of pig houses has sterilization and deodorization modules, filtering and killing 99.9% of bacteria.



Independent ventilation in finisher barns

The intelligent environmental control team thoroughly investigated the pig houses for ventilation calculation, effect evaluation, data analysis, and process improvement, explored parameters for pig comfort, and established comfort standards of Muyuan. The pig houses are equipped with intelligent environmental control devices for the collection of data such as temperature, humidity and wind speed. Based on the IoT technology, caretakers can monitor the whole farming process in real time, and control fans, sprinklers, air inlet windows, heaters, etc. This enables an intelligent management of the pig house environment, and the adjustable environmental control parameters account for differences in pig body weight as precise as 0.1kg. Muyuan has set up ammonia discharge programs in pig houses and specified ammonia concentration standards according to weights and pig types to ensure that ammonia concentration is kept within the appropriate range. By intelligent inspection and comfort level evaluation, real-time feedback is sent to the duty manager. This facilitates the smooth operation of the environmental control system, enables intelligent regulation and control, and creates a healthy and comfortable environment.

Pig house temperature standard comparison					Unit: °C
Pig group	Muyuan standard	USA ² standard	GB ¹ standard	Other standards	
Nursery pigs	24-29.5	22.8-27.8	16-28	16-30	
Finishing pigs	19-26	16.7-26.7	13-27	10-27	
Lactating sows	23-24	15.6-23.9	16-27	10-27	
Pregnant sows/ gilts	24	12.8-26.7	13-27	10-27	
Boars	23-24	12.8-23.9	13-25	10-25	

Pig house humidity standards	
Time period	Humidity
First 7 days upon arrival	55%-60%
7 days after arrival	50%-70%

Ventilation volume standards							Unit: m ³ /(h·kg)
Pig house type	Muyuan standard			GB standard			
	Winter	Spring & Autumn	Summer	Winter	Spring & Autumn	Summer	
Nursery pigs	0.2	0.3	1.0	0.3	0.45	0.6	
Finishing pigs	0.1	0.3	0.7	0.35	0.5	0.65	
Lactating sows	0.1	0.5	0.9	0.3	0.45	0.6	
Pregnant sows/ gilts	0.1	0.3	1.2	0.3	0.45	0.6	

Standards for ammonia concentration in pig houses				Unit: mg/m ³
Pig house type	Muyuan standard	GB standard	USA standard	
Boar houses	15	25		
Dry or pregnant sow houses	11-15	25		
Lactating sow houses	8-15	20	8-15	
Nursery houses	8-15	20		
Grow-finish houses	9-15	25		

Notes:

1. GB standard refers to the Chinese national standard of "Environmental Parameters and Environmental Management for Intensive Pig Farms" (GB/T 17824.3-2008).
2. USA standard refers to "PIC Wean to Finish Manual (2019)" and other relevant literature.

Pig Farming Management

Piglet management

Muyuan piglets do not suffer from teeth clipping and teeth grinding. We implement practical monitoring and treatment measures to record and reduce the nipple-biting incidence and piglet facial damage.

Timely care

The company has a herd health management team of more than 8,000 professionals committed to preventing diseases and safeguarding herd health; meanwhile, we ensure that pigs will receive timely and professional care in case of any injury or disease. The intelligent pig farming expert system monitors the real-time status of pigs to achieve early detection and early treatment of sick pigs. Caretakers patrol the pens at least twice a day to make an overall assessment of the barn environment and pig conditions. When abnormal pigs are found, they will be marked and singled out for special care.

Professional farming

Our professional caretakers care for the pigs meticulously. Empowered by veterinary teams' and intelligent equipment teams' regular training, our caretakers excel in health management and intelligent equipment application. Meanwhile, the Company regularly organizes training on animal welfare-related knowledge to enhance caretakers' awareness of animal welfare, improve their professional abilities in animal health and welfare, and help them better understand the specific contents of animal welfare standards and applications in production.



Training farming employees on site

Muyuan Won the "Good Pig Production Award"

In December 2020, the International Forum on Animal Welfare and Public Health, i.e., National Good•New•Famous•Special Welfare-friendly Product Launch Meeting was held by ICCAW in Beijing. Muyuan won the 2020 "Good Pig Production Award".



Humane Slaughter Operations

Improve transportation comfort

Before pig transportation, feed intake is accordingly limited to reduce stress and mortality during the transportation. Trucks for pig transportation are equipped with air-filtration and sprinkling systems for temperature modification. Surfaces of equipment such as transport vehicles, loading ramps and guardrails are filed smooth to prevent injury and pain.

As for the transfer process, Muyuan has set limitations as in no longer than 8 hours and no faster than 60 km/h. Shorter routes and smoother roads are chosen to reduce pigs' fatigue. Lame pigs are prohibited from transportation. To avoid excessive stress caused by driving pigs along a slope and to guarantee the safety of staff, we do not use gradient chutes for unloading. Having received proper animal welfare training, the pig-transfer staff drive pigs with special tools and give sufficient care.



Air-filtered trucks for transporting pigs

Pre-slaughter rest

Rest pens are equipped with sprinklers, drinkers and automatic ventilation systems, to guarantee a good rest for the pigs. By sprinkling and fanning, the inside environment is regulated to reduce stress caused by transportation. Rest pens are designed for pigs to enter from one end and exit on the other end, with a few corners where light is shielded. Pigs are also supplied with drinking water all the time.

Humane stunning

With a comprehensive consideration of animal welfare, all Muyuan slaughterhouses adopt CO₂ stunning technology, which has been evaluated by specialized technicians to formulate the best CO₂ concentration and stunning time. Meanwhile, CO₂ stunning parameters are adjusted according to the environmental differences between the northern and southern regions of China.



Chapter 1

Dedication to Food Safety

Produce safe food for society, improve the quality of the public's life, and help people live the fullness of life.

Create substantial value with our own strengths, excluding nominal profit.

- Basic Law of Muyuan

Highlights

Muyuan has improved the "6+1" food safety assurance system. It has upgraded its intelligent equipment and adopted a whole-chain covered digitized quality management to achieve clear traceability and monitor all indicators in production, safeguarding food safety in all respects.

Muyuan pursuits technology-driven antibiotics reduction. By promoting intelligent farming, enhancing biosafety management, conducting research on pharmacokinetics and antibiotics substitutes, Muyuan strives to cut antibiotic use and produce high-quality pork.

All staff have been subject to food safety and quality assessment.



The Culture of Food Safety

Food Safety Concepts

Food is one of the paramount necessities of the people. Food safety is a top priority, a crucial issue related to public safety, people's livelihood as well as the survival and development of food enterprises. Based on compliance management, MUYUAN has developed a food safety management system that covers the whole process of pork production. Committed to producing safe pork products of the world's highest standard and holding fast to its vision of "serving people with safe pork to help them enjoy a richer life", MUYUAN has been raising the awareness of food safety and quality management in all employees. It has also been promoting technological innovation, upgrading digitized quality control and removing obstacles along the whole industrial chain.

Publicity and Implementation of Food Safety Concepts

We attach great importance to creating a food safety culture for the employees to see, hear, and feel. We want to make sure that food safety awareness runs deep in every employee's mind and that the whole company is unified in thought and action.

To see

We increase the publicity and implementation of food safety to improve our employees' awareness, by means of our online learning center and our Food Safety Center WeChat official account, and by using food safety knowledge map, food safety & quality brochures and our bulletin board.



To hear

In 2021, we organized 3 food safety & quality management training sessions at the Group level and 2,473 food safety training sessions at region/subsidiary/farm level to publicize food safety and improve our employees' knowledge of food safety.



Food Safety & Quality Management Training

To feel

Through food safety & quality management certification for our employees, we implement food safety culture and jointly improve product quality. In December 2021, we held the fourth Food Safety & Quality Management Certification assessment. A total of 126,000 out of 129,000 employees obtained the certification with a passing rate of 97.7%.



Certificate for Food Safety Certification

Food Safety System

MUYUAN Production Model

MUYUAN adopts the production model of "fully independent farming, whole-chain covering, and intelligent operation" and has formed an industrial chain that integrates feed production, pig farming and slaughtering. Digital quality control has been applied throughout the whole process, achieving transparency and traceability.

MUYUAN's over 600 professional quality control officers manage the food safety and product quality throughout the whole production process, making sure that every piece of pork meets quality standards, providing consumers with safe and reliable pork products.



Food Safety Assurance System

Muyuan has upgraded its whole-process food safety management, all the way from raw materials purchase to the slaughtering end. It has improved the traceability system and formed a "6+1" food safety assurance system that monitors indicators throughout the production to safeguard food safety in all respects.

Chain section	Food safety prevention and control measures
Raw materials	<ul style="list-style-type: none"> We have established a sound business partner evaluation system for selecting qualified business partners, through the coordinated efforts of the quality control, nutrition/veterinary and purchasing departments; We have established a goods inputs management system for compliance evaluation and food safety risk monitoring of materials, fully guaranteeing the quality of input goods.
Feed	<ul style="list-style-type: none"> We applied the high-temperature prolonged sterilization technology in feed production, providing herds with safe and high-quality feed; We adopted the FSSC 22000 standard and strictly implemented the Code for Feed Quality and Safety Management and other requirements. Every risk point in the business chain of "purchasing - storage - processing - transportation - pig farms" is under control. The whole feed production process is monitored and controllable; By the end of 2021, 13 feed mills had obtained the certification of the FSSC 22000.
Raising & breeding	<ul style="list-style-type: none"> We cut off the pathogen transmission route through intelligent environmental control, creating healthy and comfortable growth environment for herds; We applied water source ultrafiltration, intelligent pipeline system and intelligent feeding system to ensure the healthy diet of herds; We upgraded the biosafety prevention and control system and applied the "Intelligent Pig Farming Expert" system to safeguard herd health in all respects; We applied the GLOBALG.A.P standard, developed and promoted a standardized internal audit system for pig farming. In 2021, we conducted more than 2,600 internal food safety and compliance audits, effectively ensuring food safety; As of the end of the reporting period, 5 farms have obtained the GLOBALG.A.P. standard certification; In 2021, our farms passed more than 260 inspections conducted by regulatory authorities.
Sales	<ul style="list-style-type: none"> Before sales, examinations are made on the withdrawal period and disease prevention and control information according to the Sales Standards for Commercial Pigs of Muyuan Foods Co., Ltd.; We implemented an accountability system for quality audit to control the quality of market pigs, ensuring food safety and providing consumers with high-quality pork products; We improved the Control Procedures for Product Recalls and the Drill Plan for Non-Conforming Product Recalls. In 2021, no product recalls occurred.
Slaughter	<ul style="list-style-type: none"> To ensure food safety from the source, our pigs are all raised in Muyuan farms; Strict inspection and quarantine procedures are implemented before, during and after the slaughter, cutting and processing operations to ensure food safety; We have obtained the certification of the China HACCP quality management system, with good process and quality management measures to ensure the safety and quality of meat products.

Whole-Process Indicator Monitoring

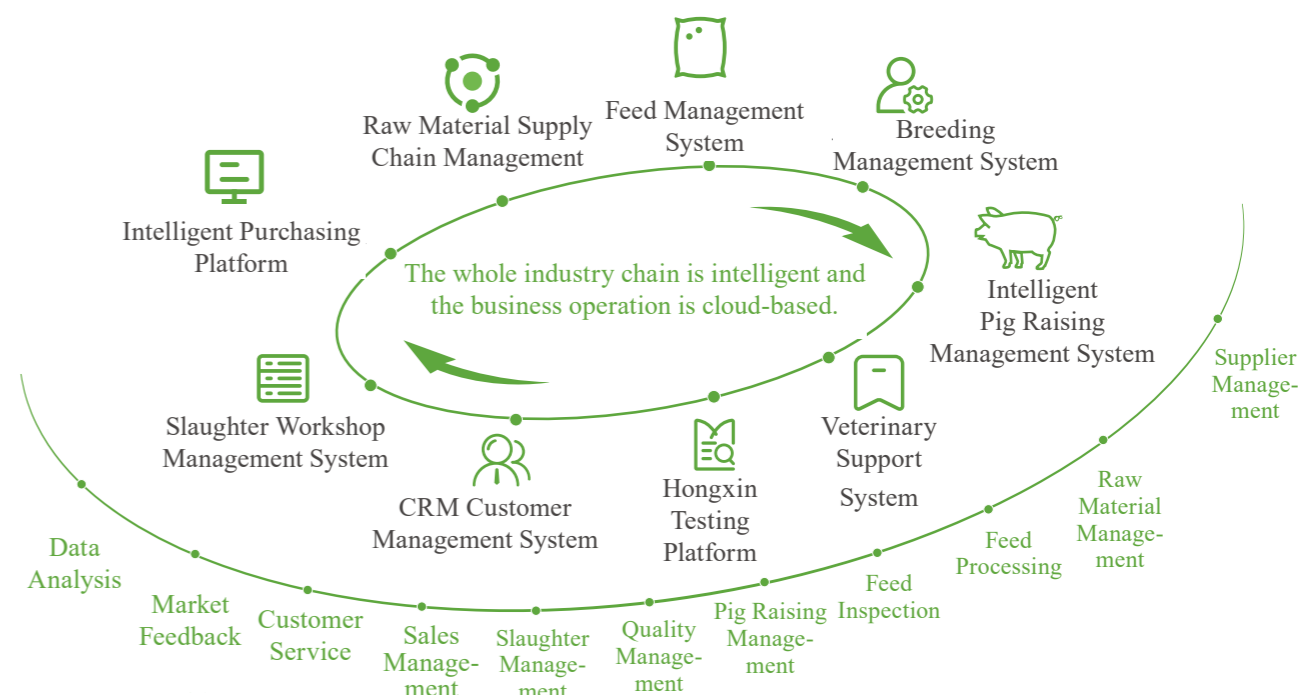
We implement the whole-process food safety management and monitor indicators across the whole industrial chain by self-inspection and third-party inspection.

Muyuan currently has more than 1,800 inspectors. In 2021, we held more than 600 training sessions of inspection techniques to improve their inspection skills and food safety management ability.

In 2021, we made food safety inspection on more than 72,000 batches of products involving 5 categories (veterinary drugs, water quality, feed, and pork). These inspections cover more than 300 items of 5 categories of indicators including residue of drugs, prohibited articles, pesticide residue, heavy metal, as well as physical and chemical items.

Transparent Traceability System of the Entire Industrial Chain

We have built up a transparent traceability system across the whole industrial chain, connecting the information systems between pig farming and slaughtering, enabling the information sharing between upstream and downstream. The RFID (Radio Frequency Identification) technology has been applied to slaughtering lines to achieve batch traceability in the chain of "pig farming company - pig farm - farming batch", ensuring all-round food safety.



Antibiotic-Free Pig Farming

The "antibiotic-free farming" aims to protect the health of both animals and humans and produce safe, nutritious, and antibiotic residue-free livestock products, which leads to a sustainable development of animal husbandry. Muyuan actively responds to the international public health concept of "One Health". It makes medium- and long-term plans, fully implements standardized and reduced usage of antibiotics, promotes antibiotic reduction in an orderly way and strives to approach toward the goal of "antibiotic-free farming".

Three levels for Muyuan's "Antibiotic-Free Farming"

What achieved	Strictly following national standards of withdrawal period; No use of "growth-promoting antibiotics" during pig farming.
Current efforts	By promoting intelligent farming, furthering disease elimination, strengthening biological safety prevention and control and other measures, raise high-health pigs and reduce the use of antibiotics.
Antibiotic-free goal	Avoid using any "prescribed antibiotics" in the whole process from nursery to finishing.

Muyuan's Antibiotic Reduction Practice



Three key points of pig farming management

Muyuan has built comfortable environment for pig through intelligent environmental control and precise management. It has conducted independent breeding for more than 20 years and continuously selected excellent genetics to improve the growth performance of breeding herds. It has also provided herds with optimized nutrition through intelligent feeding.



Biosafety and bacterial vaccines

We have upgraded the prevention and control system for biosafety comprehensively, fully safeguarding pig herds' safety and reducing the risk of disease transmission.

We actively advanced the evaluation and application of bacterial vaccines, improving herd resistance to bacterial diseases and thus reducing antibiotic use.

Twenty-eight subsidiaries were certified as disease-free plots. Seventy-four farms were awarded as National Standardized Demonstration Farms of Livestock and Poultry.



Strict regulation on veterinary antimicrobials

We strictly implemented the Measures for the Administration of the Prescription and Non-prescription Drugs for Veterinary Use. All prescriptions are issued by licensed veterinarians. The record and management on prescription and the use and storage of veterinary drugs are enhanced through information systems.

Intelligent patrol and inspection are combined with intelligent dosing to achieve early identification, early treatment and precise dosage.



Prudent drug use

We carried out pharmacokinetics studies, expanded the database of antimicrobial susceptibility, and enhanced the sharing of prescriptions, thus ensuring the accuracy, susceptibility and efficiency of drug selection.



Research and application of veterinary antimicrobial substitutes

We have actively promoted the evaluations and research on various antimicrobial drugs and applied several acidifier products. The current products under research include probiotics and bacteriophages.

Coordination in ASF Prevention and Control

African swine fever (ASF) has seriously affected the developments in global pig industry. Muyuan actively cooperated with government authorities in ASF prevention and control. We paid visits to medium- and small-sized farmers near our farms to identify ASF hazards. We shared with them disease prevention and control experience, and provided them with disinfection supplies. By helping to improve the awareness and ability of epidemic prevention and control in the whole industry, we aimed to control ASF jointly with our peers and boost the development of the industry.



Muyuan Sharing Its Experience in ASF Prevention and Control

Chapter 2

Jointly Building Commercial Civilization

Meet the demands of customers. Never impose whatever you dislike on others, but showing towards others what you yourself would like, is admirable. Always feel for others and treat others with honesty and sincerity. We take customers as brothers and help each other so as to realize fairness, transparency, simplicity, worry-free business transactions, high-efficiency and win-win results.

Adhere to corporate values and construct a platform which allows everybody to share in benefits.

-- Muyuan Basic Law

Highlights

Muyuan actively explores a win-win cooperation model to enhance the value of all links in the industrial chain. We spare no effort to build a sound industrial ecology and to promote business civilization.

By the end of 2021, we have established partnerships with over 10,000 business partners.

We empowered more than 1,000 small and medium-sized business partners and consolidated financial resources of 7.71 billion yuan.

Muyuan has signed the Anti-Corruption Agreement with 100% business partners.



The Concept of Commercial Civilization

Muyuan has been keen to construct a shared platform to connect all parties in the industry and establish in-depth collaboration with business partners. By providing technology, management and funds, Muyuan has been contributing to the development and upgrade of the whole industrial chain through improved efficiency and reduced costs. Muyuan strives to establish a beneficial industrial ecology, lead industrial development and contribute to commercial civilization.



Optimizing Supply Chain Management

Closed-Loop Supplier Management

In order to strengthen the strategic cooperation with business partners, Muyuan has improved its business partner management system, and realized the closed-loop management of supplier access, performance evaluation, supplier management and certification. Muyuan continuously improves its communication mechanism with business partners, helps business partners improve the awareness of environmental and social risks, and strengthens the sustainable management of the supply chain. By the end of 2021, Muyuan had established partnerships with more than 10,000 business partners.

Access

- Muyuan has updated the business partner access standards. Through credit evaluation, qualification verification, on-site inspection, quality assessment and cooperation commitment, it focuses on the review of business partners' enterprise credit, comprehensive strength, financial status, enterprise reputation, cultural identity, contractual capacity, on-site management and technology, strategic coordination ability and other indicators.

Evaluation and Management

- Muyuan has improved the business partner regular evaluation system. Based on their performance in quantity, quality, price, contractual capacity, quick responsiveness, strategic coordination ability, biosafety management, integrity, etc., business partners are assessed on quarterly, semi-annual and annual bases. The performance of business partners' social responsibility is included as a plus in the annual performance evaluation system, and Muyuan grades business partners accordingly.

Annual Certification

- According to the results of annual performance evaluation, Muyuan conducts annual certification of business partners in four grades: AAAAA, AAA, A and B. Excellent business partners will be awarded with special titles. Muyuan will sign annual cooperation agreement, enhance and strengthen the strategic cooperation with such business partners.

Improved Communication with Business Partners

Muyuan has established a global procurement network. By holding business partner conferences, quarterly senior leaders' visits, online and offline daily communication, special training sessions and exchanges and other ways, we have strengthened communication with business partners to achieve mutual benefit and win-win results.

In 2021, Muyuan held two Honesty & Integrity Meetings and 22 special training sessions on biosafety, integrity and other topics with 1,301 business partners participating. Through unremitting efforts, we have strengthened contact and cooperation with business partners so as to achieve joint development.



Supplier Conference of Baishui Muyuan



Supplier Conference of Zhengyang Muyuan

Strengthening Anti-Corruption Management of Procurement

Muyuan constantly optimizes and upgrades the procurement process, standards and information system, identifies corruption risks, continuously improves internal control and management, and realizes transparent procurement. The Company implements strict anti-corruption management for purchasers, conducts anti-corruption training every quarter, and all purchasing staff sign the Anti-Corruption Commitment of Muyuan Purchaser.

Meanwhile, through an all-round anti-corruption management, Muyuan works with business partners to create a fair and transparent business environment, thus promoting the sustainable development of the supply chain.

Pass the anti-corruption test

Business partners are required to watch the anti-corruption publicity video on the intelligent procurement platform and pass the anti-corruption and integrity test for access.

Jointly safeguard partnership

All business partners are required to sign the Business Partner Anti-Corruption Agreement, Supply Agreement and Confidentiality Agreement to jointly combat commercial bribery, corruption, unfair competition, commercial fraud and other acts against cooperation.

Hold regular anti-corruption meetings

The Company holds anti-corruption conferences at the Company level and regional level every year to continuously strengthen anti-corruption awareness.

Put up anti-corruption posters

Muyuan designs anti-corruption posters and requires business partners to put them up in warehouses and offices to create an anti-corruption atmosphere.

Strengthen the awareness of anti-corruption and self-discipline

Muyuan carries out publicity activities before public holidays to remind employees and business partners to act upon the anti-corruption and self-discipline principle, thus building a strong defense line against corruption.

Notification and report of corruption

In case of any acts of corruption, the Company will strictly follow the Business Partner Anti-Corruption Agreement and publicize it on the intelligent procurement platform.



Reporting Hotline

+86-17837751511



Reporting E-mail

sjb@muyuanfoods.com



WeChat Official Account: 廉洁牧原 (Anti-Corruption Muyuan)

Empowering Partners through Supply Chain Finance

Based on the needs of industrial chain partners, Muyuan built a financial service platform for the pork industry, integrated business data of core enterprises, government data of government departments, Internet big data, etc., and realized the full sharing and integration of bank, government and enterprise data. It carried out industrial chain financial strategic cooperation with financial institutions such as Agricultural Bank of China, Bank of China and China Merchants Bank. This helped financial institutions accurately depict customer portraits and accurately locate needs through big data analysis, customized personalized financial service products for industrial chain partners, provided more efficient and convenient supply chain financial services, helped partners realize the optimization and reorganization of resource endowment and promoted the high-quality development of the industry.

In 2021, Muyuan promoted pork industry empowerment by finance resources. It coordinated with financing institutes and helped providing supply chain financial services to over 1000 small and medium-sized enterprises, helped its business partners to obtain a total of 7.71 billion yuan from banks.

Build a Sustainable Supply Chain

Muyuan attaches great importance to the impact of supply chain on economy, ecology and society and the sustainable development of enterprises in the supply chain. It is committed to building a sustainable supply chain, practice responsible purchasing and controlling the environmental and social risks of business partners.

Respect Business Partners

Muyuan respects every business partner. We adopt unified standards for performance evaluation to create a fair and transparent cooperation environment. By the end of 2021, 122 business partners of AAA grade and above are headed by women, accounting for 17.7% of business partners.

Responsible Procurement

We purchase raw materials responsibly to protect the interests of all parties of the supply chain. In 2021, influenced by COVID-19, African Swine Fever and international tensions, the grain market fluctuated greatly. Muyuan adhered to the spirit of contract and purchased responsibly, protecting enterprises along the supply chain and promoting the sustainable development of the industrial chain.

Major soybean meal suppliers of Muyuan, such as Cargill and Yihai Kerry, are practitioners of sustainable soybean supply. Muyuan will work with these partners to continuously improve the sustainability of soybean supply chain and jointly promote the sustainable development of agriculture.

Reduce Grain Waste

Muyuan has actively responded to the call of reducing grain waste and ensuring national food security. It has carried out the investigation and transformation of drying towers in the central plains region, and guided business partners to build drying towers, so as to improve grain quality and reduce losses. Muyuan purchased and stored 600,000 tonnes of dried corn and reduced grain loss by 12,000 tonnes.



Drying Tower

Improving Suppliers' Code of Conduct

The healthy and stable development of the supply chain is the key to the sustainable development of the whole industrial chain. In order to deepen the strategic cooperation with suppliers and realize the sustainable development of the whole industrial chain, Muyuan has improved the Suppliers' Code of Conduct, including labor and human rights, health and safety, environment, business ethics and management system. In this way, we try to transmit the concept and requirements of sustainable development to partners and guide them to integrate sustainable development into their business strategies and attach importance to social responsibility and environmental responsibility, so as to improve the sustainable development of the whole industrial chain.

Improving Customers' Experience

Optimizing Customer Support

Muyuan insists on creating value for customers with a highly responsible attitude towards customers. It has set up communication channels such as on-site visits, regular visits to customers, hotline, WeChat official account and official website to learn about customers' opinions. It has improved response speed, optimized product quality and services, even providing services beyond consumer expectation, such as cold chain logistics transportation, customized product services and exclusive customer service team.

Muyuan always adheres to customer orientation and fair trading, and constantly optimizes trading methods and processes to make trading more efficient and convenient. In 2012, Muyuan initiated and fully implemented a pricing model of live pigs decided independently by customers, handing over the pricing power to the market and customers, and realizing high quality and competitive price, zero intervention, zero negotiation and zero privilege. In 2018, in order to prevent ASF, Muyuan implemented unsupervised trading and developed sales APP. The customers could monitor weighing and settle documents through their mobile phones and the sales process was simplified. These measures continued to influence and change the industry environment, and boosted the development of commercial civilization.



Set up National Customer Service Hotline

The official national service hotline has been set up to solve customers' problems before, during and after sales, providing quick access, quick acceptance and quick solution to improve customers' experience.



Build Intelligent Information Platform

Intelligent sales: We developed the intelligent sales App to improve efficiency of making orders. The whole trade process is transparent, making transactions simpler and more convenient.

Logistics management system: Vehicles can be managed online, which is more efficient and capable of fast respond to customer feedback.



Logistics Service

In order to reduce costs and increase efficiency for customers, we have enhanced transportation services, hardware and software upgrades to control transportation risks. Cold chain logistics service is provided to pork clients to improve customer experience.



Breeding Pig Insurance

In order to better serve breeding pig customers and reduce risks and losses caused by factors like diseases, Muyuan cooperated with China United Property Insurance Co., Ltd. and launched commercial breeding pig insurance service in October 2020. Since 2021, it has insured 2,712 customers with 167,000 breeding pigs, and reduced the losses of customers by nearly 10 million yuan.



Dedicated Support

Exclusive customer service teams were established to provide customized solutions.

Label Management

In order to meet customers' demand for customized products and enhance customers' trust, in 2021, Muyuan updated the Process for Changing External Identification (Labels and Internal and External Packaging). Through organizing label standardization training, we aim to clarify responsibilities of various departments and strengthen the cooperation between departments, thus to realize the systematization and standardization of external identification and the compliance management of label identification.

Information Security

Muyuan respects customers' privacy and protects customers' information security. The Company has established a professional network and information security team, which is responsible for project management, product design, software development and application, database development and operation and maintenance, information security, etc.; it has formulated and applied three types of IT schemes: system development, information security and system operation and maintenance. It has issued and applied 15 related regulations such as General Strategy of Information Security, Information Security and Confidentiality System and Data Security Management System. The Company has set up a hierarchical access mechanism based on employee position. It also signed a confidentiality agreement with employees to protect customers' privacy and information security. Muyuan continues to improve the information platform and the emergency response plan for information security risk, actively deploys security equipment to detect and block malicious attacks to guarantee operation and maintenance security effectively. This year, a third party consultant was appointed to evaluate the overall risk prevention and control of the Company's information system, carry out data security training covering all employees, and strengthen security awareness.

Muyuan also sent employees to visit successful enterprises such as Midea, Huawei and Alibaba and attend digital industry summits and the Apsara Conference to learn industry experience and advanced information technology, so as to promote Muyuan's digital transformation.



Muyuan Staff Visiting Midea

Complaint Management

Muyuan constantly improves the customer complaint handling mechanism. It adheres to the standard of "responding to every complaint and solving them separately to reach a consensus". We have classified after-sales problems, simplified the approval process of compensation and improved the service.

Building Industrial Clusters to Drive Economic Development

Muyuan actively integrates the supply chain resources, transfers the business needs to the upstream and downstream of the industrial chain, cooperates with the government to build industrial concentration zones. It also creates an ecological platform in cooperation with the government, business partners, financial institutions and other stakeholders, and aggregates high-quality elements and resources to achieve win-win results.

Neixiang Industrial Clusters

Focusing on the pork industrial chain, Muyuan actively integrates into the county economic development, works with Neixiang County government and financial institutions for a coordinated development of primary, secondary and tertiary industries in Neixiang, to attract supply chain enterprises to settle in Neixiang by the high-quality industries. By the end of 2021, more than 3,300 supply chain enterprises have settled in Neixiang, and a favorable ecosystem of Neixiang industrial clusters is taking shape.

Project	Project introduction
Neixiang Muyuan Meat Industry Complex	The project includes 21 intelligent multi-story pig buildings with all-around air filtration, with a total investment of 5 billion yuan and an annual output value of 10 billion yuan. It produces 720,000 tonnes of feed per year; 2.1 million market pigs per year; and 2.1 million slaughtered pigs per year. The project has increased the land use rate by five times, optimized the industrial chain, improved the resource utilization rate, reduced cost, and realized "input of grain and output of meat", "beginning with agriculture and ending with industry".
Muyuan Industrial Park	It is expected that the investment of the project will be 5 billion yuan, covering an area of 1,500 mu (100 hectares), with an annual output value of 15 billion yuan and offering 5,000 jobs. At present, the first phase of the project has been completed and put into use. A special glass manufacturing project of Hengmei Glass, a controller manufacturing project of Rongchuang Xinhe, and an electrical equipment manufacturing project of Huaheng Electric Power have been in operation in the park. These projects saw a total output value of about 300 million yuan and more than 400 local employees have been hired in 2021.
Muyuan Food Industrial Complex	It is located in Neixiang industrial agglomeration area, with its first phase construction completed. An annual slaughter capacity of 2 million pigs has been put into use. In the future, this project will greatly contribute to food processing industry based on its pork industrial chain, drive the upstream and downstream industrial chain development, and become a global meat processing base.
Neixiang Muyuan Intelligent Logistics Park	The project covers an area of 4,051 mu (about 270 hectares) with a total investment of about 3 billion yuan. It is located at the junction of Henan, Hubei and Shaanxi provinces. Based on Muyuan's pork industry, it provides logistics service for all industries, so as to reduce logistics costs and improve logistics efficiency. After completion, the Park can accommodate more than 500 enterprises and serve 910,000 vehicles annually. With a freight throughput of 10 million tonnes, the park has an output value of more than 20 billion yuan and an annual tax of more than 200 million yuan, directly creating 3,000 jobs and providing strong support for regional economic development.

Case

Henan Zhongjian South Purification Technology Co., Ltd. (hereinafter referred to as "Zhongjian South"), a business partner of Muyuan, passed the business partner assessment in 2019 and was designated as the core supplier of air filter in 2020, supplying 30% of the Company's air filters. At present, Zhongjian South has established plants in Neixiang County and Songyuan (where Muyuan has subsidiaries), Jilin Province with a total of 8 production lines, driving the common development of local upstream enterprises such as injection molding companies and boosting regional economic development. In 2021, the amount of cooperation between Zhongjian South and Muyuan reached 82.49 million yuan, hired 100 local employees and paid taxes of more than 5 million yuan.



Zhongjian South's Factory

High Quality Development Promotes Social Progress

Helping the Launch of Live Hog Futures

Since 2017, during the design of the live hog futures contract and regulations, Muyuan has demonstrated the feasibility through teleconferencing and on-site meetings with Dalian Commodity Exchange (hereinafter referred to as "DCE") for many times. And, DCE has conducted on-site investigations in the pig farms and cleaning & disinfection centers of Muyuan many times. In June 2018, Muyuan cooperated with DCE to hold training sessions concerning hog futures settlement, joined by more than 20 futures companies and investment institutions as well as testing and certification institutions. The close cooperation between Muyuan and DCE promoted the successful listing of pig futures. Futures instruments have been used to serve the real economy, facilitating the high-quality development of pig industry.

On January 8, 2021, China's first animal husbandry futures variety and live delivery variety - Live Hog Futures were listed in DCE. This further filled the gap of animal husbandry futures varieties, promoted the stability of pig supply and prices, improved the long-term mechanism for the steady development of pig industry, and advanced the healthy development of animal husbandry and breeding industry.



Joint Research and Development for Win-Win Cooperation

Based on its own business needs, Muyuan has been developing new technologies, upgrading facilities and optimizing existing systems in joint effort with extraordinary suppliers. This has deepened the cooperation and led to mutual benefits, promoting the industrial upgrade and sustainable development.

R&D Projects	R&D achievements in 2021	Project Picture
Air filter	Muyuan formulated air filter standards for animal husbandry and standardized the production and manufacturing of special filters for the industry, thus improving comprehensive quality and prolonging service life of the filters. Through building industrial clusters, Muyuan created more than 1,000 jobs. At the same time, Muyuan has promoted the use of precision filters in farming, which are originally used for healthcare and high-end residential buildings, and promoted the upgrading of epidemic prevention and control of the industry.	
Deodorizing cooling pad	The upgrading of deodorization wall combined eddy water distribution with deodorizing cooling pad. The available area of the deodorization wall is increased from 62.4% to 86.52%, and the gas removal rate is increased from 69.69% to 76%, thus improving the deodorization and sterilization effect and reducing carbon emission.	

Industry Exchange

Based on its own experience and advantages, Muyuan actively participated in the formulation of industrial standards such as Precautions for the Operation and Management of Livestock and Poultry Manure Treatment and Utilization Facilities in Henan Province, and Technical Guide for Self-Monitoring of Pollutant Discharge Units in Livestock and Poultry Breeding Industry (exposure draft). Meanwhile, it also joined in various industry exchange activities, shared experience, and contributed to the development of the industry.



The 1st International Summit on Sci-Tech Innovation in Livestock and Poultry Breeding 2021



The 3rd China's Large Scale Swine Farm Intelligent Manufacturing Forum



The 7th Global Pig Forum and The 18th China Pig Industry Development Conference



The 5th China Livestock Industry Summit Forum



The 19th China International Meat Industry Exhibition 2021



The 19th (2021) China Animal Husbandry Expo and 2021 China International Animal Husbandry Expo



The 10th Leman China Swine Conference and World Swine Industry Expo

Contributing to "the Belt and Road" Initiative

"The Belt and Road" Initiative is an important international cooperation initiative for China and countries along the Silk Road to share high-quality production capacity, jointly discuss project investment, build infrastructure and share the fruits of cooperation. In response to the national call of "The Belt and Road", Muyuan actively participated in the cooperation and exchanges with countries along the Silk Road. Based on the pig farming business, Muyuan launched Henan's first China-Europe barley freight train, which increased import categories and balanced import and export volumes. In 2021, Muyuan imported raw materials from countries along the Belt and Road via the China-Europe railway express, facilitating the connectivity and market integration with these countries.





Chapter 3

Jointly Promoting Sustainability

We seek to promote an environment-friendly and animal-friendly business pattern, circular economy, and cleaner production with a view to reduce negative influence on the atmosphere, and upgrade the standards of food quality, to improve industrial ecology and promote sustainable development.

--Muyuan Basic Law

Highlights

In 2021, Muyuan provided 8,334 agricultural technical services, serving 9,281 villages, 272,100 farmers and 3,630,900 mu field, reducing cost and increasing income by 209.29 yuan/mu.

Muyuan also made improvements in 185,300 mu of saline-alkali land and controlled the desertification of 69,400 mu of land in 2021. As a result, the organic matter in these saline-alkali land has increased by 13.46%.

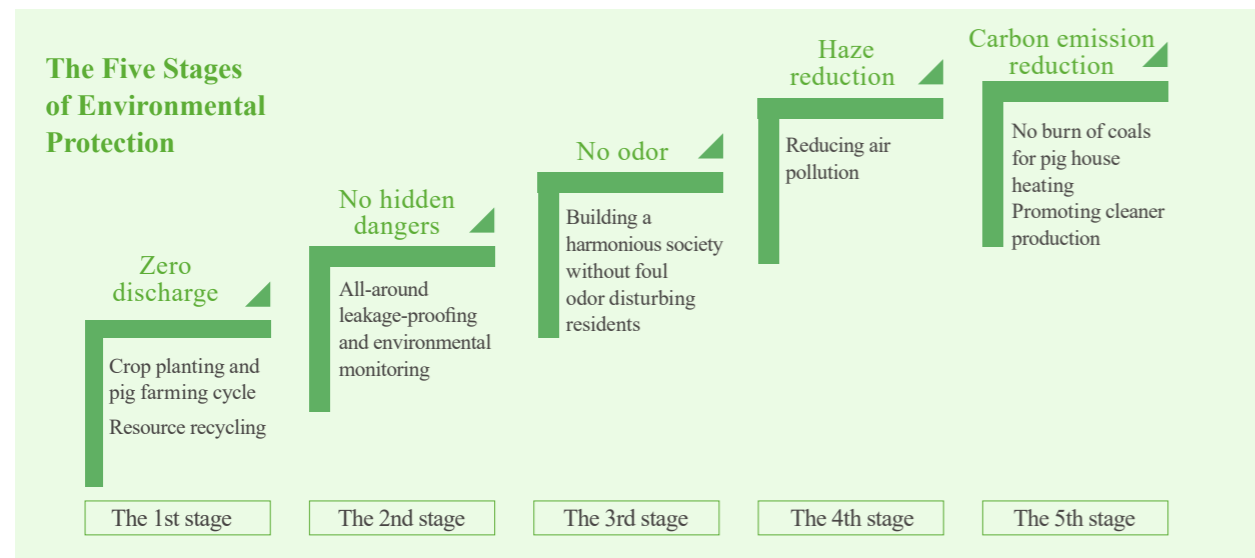
Muyuan has continuously optimized the model of the circular economy. The independently developed pig manure decolorization and deodorization process has increased resource utilization efficiency.

The average water consumption per head is 1.84 cubic meters.

Aerial photograph of Binzhong Muyuan (Guangxi province)

Improving Environmental Management

Muyuan sticks to the development principle of "no cost shifting, no shirking responsibilities and no hidden dangers left behind" and practices self-discipline. Muyuan has built the "Five Stages of Environmental Protection" model and established a comprehensive environmental management mechanism covering each sector of the industrial chain. Muyuan continues to innovate environmental protection technology, improve environmental protection standards, strengthen environmental management, and vigorously develops a circular economy model that integrates crop planting and animal farming to help build a beautiful China.



Environmental Management Mechanism

The Environmental Protection and Logistics Department is responsible for environmental management and reports to the Board of Directors. The department has four levels of organization structure for environmental management, including provincial and municipal logistics support departments, subsidiary management teams and farm operation teams. In addition, the Environmental Monitoring Department and six Environmental Supervision Centers were established to supervise and manage the Company's overall environment issues, continuously implement and improve the Company's internal third-party environmental monitoring system, and report to the Board of Directors regularly. Muyuan continuously improves and implements the internal environmental standard management system according to the requirements of the ISO14001:2015 Environmental Management Systems, and has obtained the certification.

Intelligent Management in Environmental Protection

Muyuan attaches importance to the intelligent development for environmental protection, and has designed intelligent control and management schemes according to the process flow. Different schemes have been applied to different farms, thus realizing automatic operation of all business flows such as automatic sewage discharge, solid-liquid separation, manure fermentation, biogas utilization, resource utilization, and environmental monitoring, etc. The intelligent schemes have improved system efficiency and ensured smooth production. Muyuan continuously improves the intelligent management platform of environmental protection, collects and uploads business operation data in real time. The system automatically analyzes various data and performs risk warning tasks to support environmental management at the most basic level, eventually improving management efficiency and promoting upgrades of the industry's environmental protection.



Muyuan environmental protection big data platform

Environmental Protection Publicity

In 2021, Muyuan carried out a series of environmental protection theme publicity, environmental protection knowledge popularization and environmental protection skills training. In this way, we have strengthened employees' awareness, helped them establish the green development concept, and enhanced their ability to protect the environment. Consequently, a green, low-carbon and environmental protection atmosphere can be created to support sustainable development.



Manure and wastewater purification training

Developing Circular Agriculture

Promoting crop planting and pig farming cycle

Muyuan always attaches importance to agricultural development, and looks for possibilities to combine efficient pig farming and agricultural development. It also explores and implements the crop planting and pig farming cycle. Meanwhile, Muyuan recruits college graduates to work on farms and farmlands, and assists farmers in planting crops so as to explore and innovate the circular economy model and fully implement the concept of sustainable development.

In 2021, Muyuan provided 8,334 agricultural technical services, serving 9,281 villages, 272,100 farmers and 3,630,900 mu of field, increasing wheat yield by 4.62%, corn by 7.79%, helping farmers reduce their investment and increase income by 209.29 yuan/mu.



Harvest in Dushan County, Guizhou Province

Muyuan made improvements in 185,300 mu of saline-alkali land and controlled the desertification of 69,400 mu of land in 2021. As a result, the organic matter in these saline-alkali land has increased by 13.46%.

Helping farmers with production and sales

Muyuan takes advantage of the Company's national layout to actively promote the "combination of crop planting and pig farming" and other regions. Through integrated manure utilization and scientific planting services by agronomists, Muyuan helps growers to build high-quality demonstration gardens of fruits such as apples, oranges and grapes. Furthermore, Muyuan supplies high-quality ecological agricultural products to consumers through Ju'ai e-commerce platform, thus forming a complete industrial chain integrating production, supply and marketing. So far, more than 20 million kilograms of special agricultural products such as rice, fruits and vegetables have been sold.

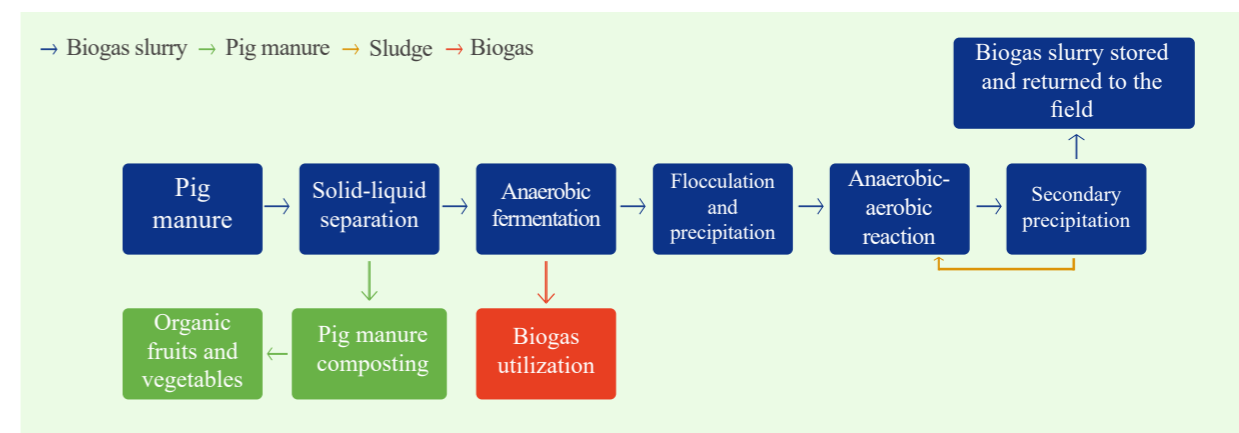


Fruit harvest in Wuming, Guangxi Province

Innovating environmental protection technology

Muyuan has been optimizing the model of circular economy. It has made efforts in promoting the adaptability of environmental protection technology and independently developed the decolorization and deodorization technology of pig manure. The pig manure is transported to the environmental protection area and separated into solid and liquid. After high-temperature fermentation, deodorization and sterilization, the solid matter is made into fermented manure, applied as fertilizer to help farmers reduce investment and increase income and improve the quality of agricultural products. Rest of the fermented manure is concentrated in the organic fertilizer factory and made into organic fertilizer, then sold and used for the common crops and cash crops, thus promoting the local circular economy. The liquid is subjected to bio-safety anaerobic treatment in the covered anaerobic pond. And biogas produced in the process is used for boiler heating and power generation

after dehydration and desulfurization. After anoxic and aerobic treatments and sedimentation, the effluent can be odorless and colorless. The treated effluent can be used in farmlands of paddy, wheat, and other crops to improve land fertility and local resource utilization efficiency.



Flow diagram of decolorization and deodorization of pig manure and returning to field

Land Utilization and Ecological Recovery

Preliminary Stage of Project

Effective risk assessment

Through joint inspection, all environmental risks and water resource risks of the project site are identified and evaluated. The nearby crops and fertilizer application patterns, water resource conditions, distribution of farms and heavy polluting enterprises are assessed as an important basis for site selection in order to avoid negative impacts on the production and life of local residents.

Rational site planning

Muyuan strictly follows the regulations such as the Technical Specification of Livestock and Poultry Breeding Pollution Prevention, the Technical Specification for Sanitation Treatment of Livestock and Poultry Manure and local policies on forbidden areas and restricted areas for pig production. When choosing pig farming sites, we avoid forbidden areas such as nature reserves, scenic spots and other areas requiring special protection, and avoid drought and water shortage areas. Muyuan ensures sufficient distance to make sure that the construction of the farms does not incur risks related to environment, biodiversity and sanitary.

Project under Construction & Operation

Continuous environmental risk monitoring and establishment of information system

Muyuan actively carried out sampling and monitoring of the soil, groundwater, surface water, noise, and crops around all the Company's farms in use. In 2021, 2010 inspections were conducted by third-party surveyors with reports issued. The monitoring data were also systematically managed, archives were established, and the surrounding environment of the site was continuously evaluated.

Sustainable of resources

Muyuan registers and files the farmlands around its sites, tests the soil nutrient elements before manure application, and issues manure application plans according to the test results and crop types, so as to customize schemes for different farms and lands. In this way, the accurate manure application and pollution-free crop planting and pig farming cycle can be achieved. By the end of March, 2022, a total of 264,161 households have been registered.

Preliminary Stage of Project Construction

Respect for local communities

Fully respecting local communities' freedom and the right of prior notice and consent, Muyuan conducts assessments concerning impacts on community, consults community, and publicizes the Environmental Impact Assessment (EIA) report and site communication channels.

Leaving no hidden dangers in seepage proof

Muyuan formulates the environmental protection schemes based on local conditions. While laying the seepage-proof membranes on the whole site, it also sets up a professional quality inspection team to conduct tensile test and inflation pressure test on each welding seam of the membranes, so as to ensure the construction quality and zero leakage and avoid the impact on soil and groundwater.

Project under Construction & Company Operation

Introduction of various green plants

Greening is based on the local vegetation characteristics and ecological environment. Muyuan has introduced local plants to expand green areas and minimized the impact on the land and ecological environment.

Commitment to the improvement of soil fertility

Muyuan continuously monitors soil nutrient changes, actively explores land improvement practices, and improves soil fertility by replacing chemical fertilizers with biogas slurry to help farmers reduce investment and increase income.

All construction projects are approved after conducting EIAs as required.

Cleaner Production

Muyuan always adheres to the principle of "waste reduction, harmless treatment, waste reutilization, and ecological circulation" and continues to promote an environment-friendly business mode. By using intelligent production process and modern low-consumption, energy saving and environmental friendly slaughter equipment, Muyuan has improved waste water treatment and reused reclaimed water. Having improved water and gas utilization rate, saved energy and discharged less waste, Muyuan is dedicated to promoting cleaner production in the whole livestock husbandry and contributes to the sustainable development of society and environment.

Energy Saving

Electricity

Formulate a clear electricity consumption standard, strengthen process supervision and management, install independent electricity meters in production sites and feed mills to monitor electricity consumption in each area, and regularly assess the performance;

Select more efficient feed mill equipment and IE3 electric motors; off-peak power consumption for feed production to save power;

Control production using intelligent equipment to reduce equipment's dead time and waiting time;

Encourage the employees to turn off lights when they leave offices and keep the air conditioning temperatures under strict control.

Gas

Equipment modification: Optimized equipment structure and increased the use of Flue Gas Recirculation (FGR);

Equipment upgrading: Use thermal oil heater to reduce gas use;

Substitution with biogas: The biogas generated by anaerobic fermentation is partially used to replace natural gas;

Intelligent control: Optimize air-fuel ratio, improve combustion efficiency and reduce gas loss.

Fuel

Use biogas heating instead of burning fuel for drying and disinfection in the cleaning & disinfecting center;

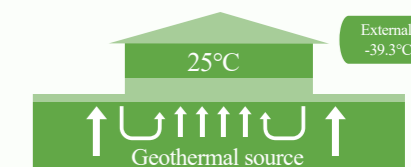
Build supporting facilities for new energy vehicles in the office areas, and encourage employees to buy new energy vehicles;

Regulate transportation arrangement for business trips to reduce fuel consumption and make greener trips.

Case

Muyuan has innovated a "non-heated" pig house. By heat exchange and reasonable use of insulation, heat loss has been reduced and therefore all these pig houses need no heating. Under the extreme environment of nearly -40°C outside, the internal temperature can reach 22~25°C.

These non-heated barns have reduced gas and coal consumption for winter heating from the source. In 2021, about 276,700 tonnes of coal consumption were saved, which is equivalent to reducing emissions by 719,400 tonnes of carbon dioxide.

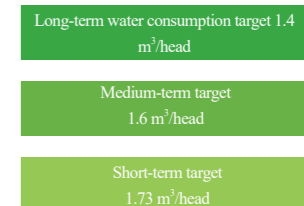


- Values:
- 1.Reducing energy consumption and smog
 - 2.More suitable environment for raising pigs
 - 3.Low cost and high profit

Water saving

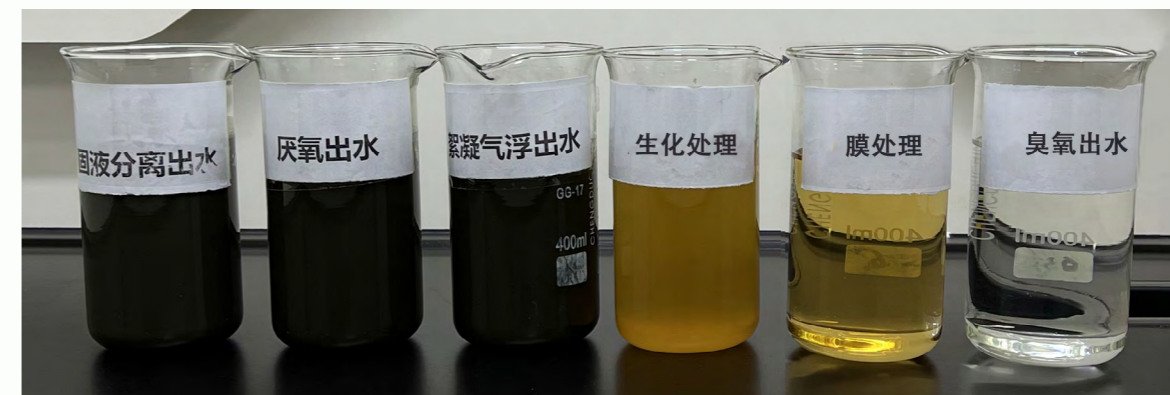
Through technological improvement, Muyuan optimizes water management and saves water, while actively responding to the national call for water conservation campaign and setting medium and long-term water conservation goals.

The Company monitors the water consumption in different production phases and has made standards. Besides, it has installed accurate measuring equipment to monitor the water consumption inside and outside the farming units so as to detect and deal with problems in time. The water conservation management system is also strictly implemented to assess clean water consumption and wastewater production and minimize the water waste. The Company has actively developed and applied water-saving technologies such as purification and reuse of liquid manure and recycling of cleaning and disinfecting water to effectively reduce clean water consumption.



Case

Muyuan strives to innovate the purification and reuse process of manure. Slurry treated through biochemical and advanced treatment technology is used for pen cleaning, deodorization and farm disinfection. By the end of 2021, the purification and reuse process of wastewater had been extended to 144 farms in Guangdong, Jiangsu provinces and other regions, saving an average of 0.45m³ fresh water per pig.



Wastewater treatment effect

Waste management

Muyuan is committed to the strict control of the waste gas, wastewater and solid waste produced during the operational process. The Company handles the waste appropriately and reduces emissions and discharges.

Waste Management

Waste Description	Emission Management Measures
Waste gas	<p>Muyuan continuously explores the optimal nutritional needs of pigs and uses low-protein diets to reduce nitrogen emissions, with a total reduction of 60,600 tonnes of nitrogen emission in 2021.</p> <p>The application of new intelligent pig houses can achieve fresh air filtration, separate ventilation, deodorization and sterilization, and the reduction of waste gas.</p> <p>It upgrades the environmental protection process. The water film dust removal, sterilization and deodorization process are applied in all farms to improve the deodorization and dust removal efficiency and reduce the emission of sulfur and nitrogen compounds and dust.</p> <p>Muyuan issued the odor assessment guide, set up a team of odor discriminators to identify and distinguish odor, strictly conducted regular examination, and gave feedback of odor impact on farms to ensure that there is no impact on surrounding residents.</p>
Pig manure	<p>Muyuan explores the optimal water intake for pigs and reduces water waste through smart devices, thereby reducing wastewater production.</p> <p>It formulates and strictly implements the Pig Manure Management Specification and Wastewater Management Measures on Farm Units to effectively manage the production and treatment of pig manure and urine.</p> <p>All sites have matching liquid manure treatment facilities, and all pig manure has been sterilized and deodorized under high temperature, made into biogas fertilizer, and finally applied to the field.</p>
Wastewater	Such wastewater is collected in septic tanks for integrated utilization after treatment.
Medical wastes	In accordance with the Medical Wastes Management Regulations, the Company formulates the Medical Wastes Management Rule of Muyuan Foods Co., Ltd. to collect and store medical wastes together, and regularly deliver them to a qualified third-party organization for biosafe disposal.

Waste Description	Emission Management Measures
Fallen stock	All farms have been equipped with facilities and equipment for biosafety disposal. The Biosafety System for Harmless Treatment and the Dead Pig Disposal Management System have been formulated and strictly implemented so as to achieve zero impact from dead pigs, zero spread of pathogens, zero environmental pollution, and zero blind area for supervision.
Slaughter waste	Muyuan has established treatment process for waste generated from slaughterhouses. Anaerobic, aerobic and denitrification treatments are adopted to treat waste water from white offal processing rooms and waiting pens. Effluent is discharged after SS, COD, BOD and total nitrogen have been treated and meet requirements. Stomach contents are composted after separating the solid and liquid and dehydration treatment.

Performance Indicator

Category	Indicator	Unit	2021	2020	2019
Consumption	Total electricity consumption	MW·h	4,328,154.29	1,727,664.52	802,396.62
	Total gas consumption	m ³	129,469,790.61	63,557,681.01	20,251,905.33
	Total gasoline consumption	liter	18,417,548.36	12,442,810.76	6,180,599.74
	Total diesel consumption	liter	70,072,490.09	/	/
	Average water consumption per pig	m ³	1.84	1.73	1.6
Circular economy	Average waste (wastewater) per market pig	m ³	1.42	1.3	1.02
	Biogas usage	10,000 m ³	960.29	305.25	361.93
	Solid pig manure treatment rate	%	100	100	100

Note:

Total electricity, gas, gasoline and diesel consumption in 2021 refers to the consumption from production and administrative work.

Average water consumption per pig (1.84 m³) refers to clean water consumed by each market pig of the Company.

Risks and Opportunities

Muyuan has actively identified climate change risks and opportunities, incorporating climate change risks into the enterprise risk information database and continuing to improve it.

Social risk

Policy risk:

In response to the Paris Agreement's goal of holding the global average temperature increase to well below 2 degrees C and pursuing efforts to limit it to 1.5 degrees C, China has proposed carbon peak and carbon neutrality goals to reduce the risk and impact of climate change, which will bring potential policy and standards compliance risks.

Risk of purchase price fluctuation:

Due to the climate impact, the price of raw materials, storage costs, transportation costs and other costs have risen, and the market prices of products have changed due to factors such as policy-based price adjustments. All these factors contribute to the risk of rising costs.

Natural risk

The Company's farms are distributed in 24 provincial-level administrative regions across the country, and its production and operation sites will be affected by natural disasters such as wind, flood, snow and earthquake. In case of disasters, the farm buildings, facilities and equipment may be damaged, and pigs may die, thus bringing direct losses to the Company. At the same time, the interruption of communications, electricity and transportation caused by disasters may also adversely affect the production and operation of the Company.

Risk Response

Response to policy risk

Effectively reduce the content of nitrogen in the feed through low-protein diet, and correspondingly reduce the generation and volatilization of ammonia nitrogen in manure management process.

Develop and apply a more efficient exhaust air treatment model through sterilization and deodorization system, reducing the emission of ammonia, hydrogen sulfide and other gases.

Achieve intelligent ventilation through intelligent environmental control system, to reduce the air consumption and waste gases emission.

Reduce carbon emissions through barns without the use of boilers for heating.

Response to risks of purchase price fluctuation

Technological R&D and innovation: Conduct in-depth research on the optimal amino acid demand of pigs, use low-protein diet, reduce soybean meal content in feed so as to reduce the risk caused by price fluctuations.

Business partner management: Establish strategic cooperation with highly qualified suppliers to strengthen the ability of the supply chain to deal with risks.

Formulate action plans for dealing with extreme weather and constantly revise and improve them. Establish the Disaster Emergency Response Mechanism and standard operating procedure (SOP) for extreme weather, make corresponding standardized videos, and set up an emergency partner archive to effectively manage and respond to risks of climate change and reduce the impact on pig farming business.

Potential Opportunity



Improving resource efficiency

Water consumption data in different stages of production is monitored and collected to formulate water consumption standards. The Company strictly implements water-saving management, formulates management system in each region, compares the actual water consumption with the standards, and evaluates the water usage of each farm to improve water utilization efficiency.

Muyuan actively develops and applies water conservation technologies, such as purification and reuse of liquid manure, recycle of cleaning and disinfecting water as well as deodorization water, etc. According to the water quality, treated water can be used for spraying, cleaning pens, deodorization, road disinfection, vehicle disinfection and other areas in the breeding process, thus realizing the recycle of water resources and contributing to sustainable development.



Alternative Energy

Biogas utilization: Through resource utilization, the waste generated from pig breeding process is treated through bio-safety anaerobic process, and the biogas generated is used for the site operation as an alternative to electricity.

Photovoltaic power generation: Make full use of idle roofs on farms and create photovoltaic power supply to relieve the electricity consumption pressure during peak hours. Create resource-saving, environment-friendly and green innovation farms and implement the concept of green development.

Barns without heating: Muyuan created non-heated pig barns, which replace natural gas with geothermal energy so that all pig houses stay warm and do not need heating.



Market Opportunity

The Company actively implements carbon emission reduction, works with domestic and foreign experts to conduct carbon self-evaluation and carbon inventory, and builds up the low-carbon green brand of Muyuan.



Chapter 4

Creating Happy Life for Employees

Bring benefits to employees. Treat employees as family members to help them grow, and build a career platform for them to achieve their values in life. Bring happiness to each employee and each family, and let them enjoy a happy life in Muyuan.

-- Muyuan Basic Law

Highlights

Muyuan has cooperated with 80 institutions of higher education. Among the 137,520 employees, 40,000 are college graduates.

By December 2021, the number of veterans employed by Muyuan had exceeded 13,000 in total.

In 2021, Muyuan totally invested more than 450 million yuan to create safe working environments and protect employees from occupational hazards.

In 2021, Muyuan helped more than 1,800 employees obtain National Vocational Skill Rating Certificate.

Introducing Talents

Muyuan always regards employees as the most valuable resources and treasure. Muyuan has been selecting people with high sense of social responsibility, thorough integrity, honesty and trustworthiness, who are ready to devote themselves and willing to take responsibilities. Muyuan has built up an open career platform for young people, providing training and skill development along with employment. We invite talents from the world who specialize in veterinary medicine, breeding, nutrition, information and intelligence technology, civil engineering and other professional fields to join us in promoting the high-quality development of the animal farming industry.

Muyuan has adopted various recruitment methods, such as online publicity and video interviews, etc. It has also signed college-enterprise cooperation agreements with 80 universities and brought in more highly educated talents by constantly building and improving campus cooperation platform. In 2021, Muyuan totally recruited more than 5,000 excellent college graduates. By December 2021, Muyuan had employed 40,000 graduates.

Muyuan strongly supports and promotes local employment. The Company recruits locally to absorb the local labor force. 74.9% (103,002) employees are from local.

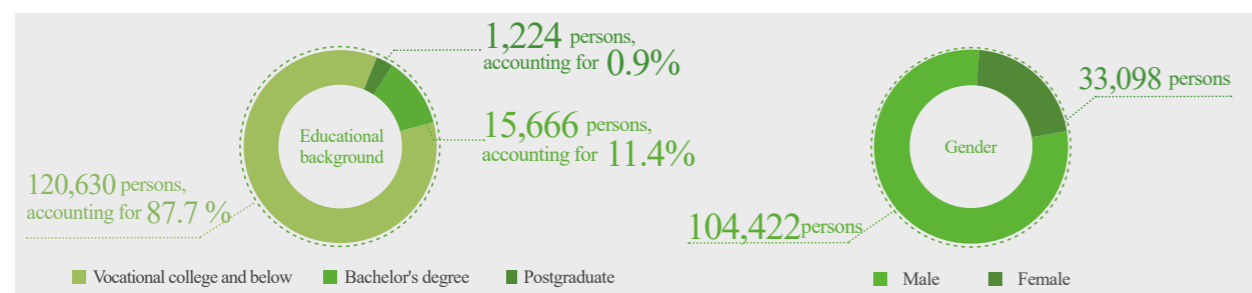
Diversity, inclusiveness and equality in employment

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 in terms of recruitment, training, promotion, vacation, salary and welfare, social insurance and so on, so as to protect the rights and interests of employees and promote harmonious employment relations. In recruitment, Muyuan adheres to the principle of equal employment opportunity. No applicant is treated unequally or discriminated against because of his/her ethnicity, gender, skin color, age, family background, religious belief, physical condition or other factors. Muyuan has made efforts in creating a positive working atmosphere where every employee can have opportunities for development and enhance a sense of ownership.

Muyuan strictly abides by the Provisions on Prohibiting the Use of Child Labor and other related laws and regulations. The company prohibits any subsidiary from recruiting minors under the age of 16 and has built a complete pre-employment information review mechanism to ban child labor. Muyuan also bans forced labor.

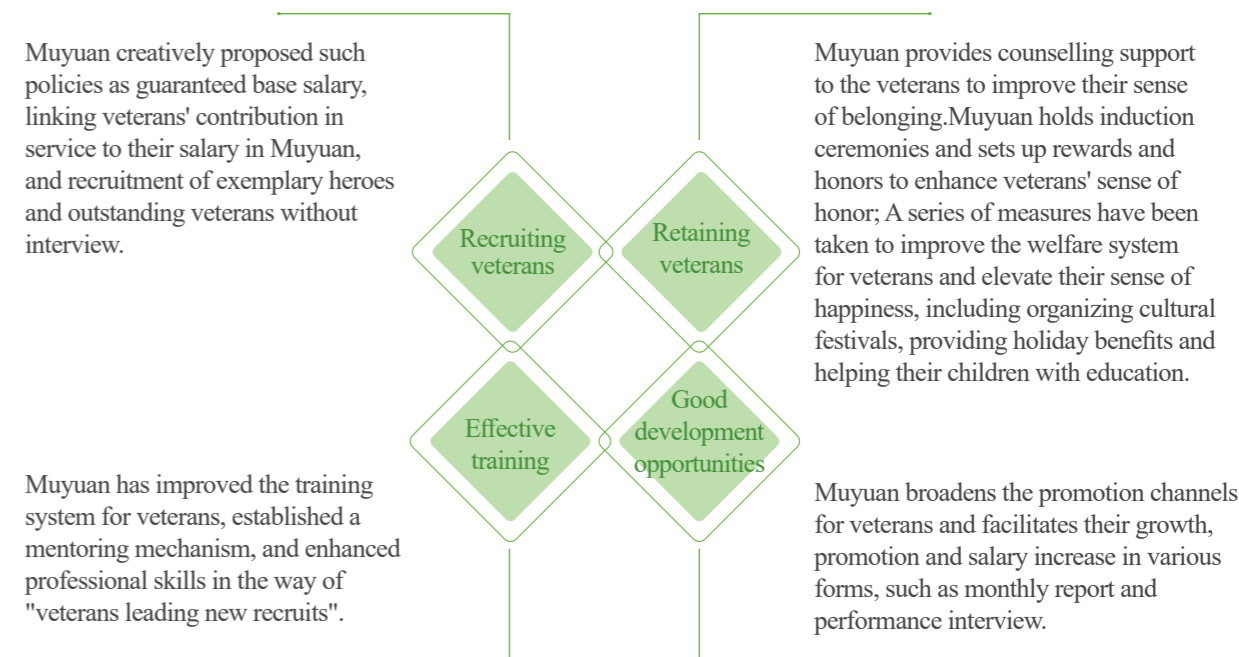
Supporting women's career development

We attach importance to gender equality and support women's career development. At present, Muyuan has more than 33,000 female employees. 27% of our senior management are female. Women accounted for 20.5% (1,692) of those in supervisory positions and above. We provide our employees with maternity leave and paternity leave in compliance with national laws and regulations. In 2021, 1,996 female employees took maternity leave and 3,195 employees took paternity leave.



Paying respects to veterans

In order to serve the veterans in every respect, Muyuan practiced the guideline of "recruiting veterans and retaining them with effective training and opportunities of development". Muyuan established a Comprehensive Service Center for veterans, which is well-organized, well-regulated and has an operational management mechanism. Muyuan helped the veterans to improve their abilities and skills and establish their confidence of reemployment by providing specific employment assistance, vocational skills training and supporting services and building an employment platform, thus helping them achieve the value of life. At the same time, Muyuan called on its partners to recruit veterans and work together to fulfill social responsibilities. Up to December 2021, Muyuan had employed more than 13,000 veterans, of which more than 300 have taken management positions at different levels and nearly 800 have become excellent engineers. Muyuan is proud to be on the "Honor List of National Veterans Employment Cooperative Enterprises in 2021", awarded as "Model Enterprise of Veteran Service".



In 2021, Muyuan held various activities for veterans, such as Best Veteran Contest and the cultural festival. These activities not only enriched their life but also elevated their sense of honor, belonging, and happiness.



Veterans now working for Muyuan

Employee voice

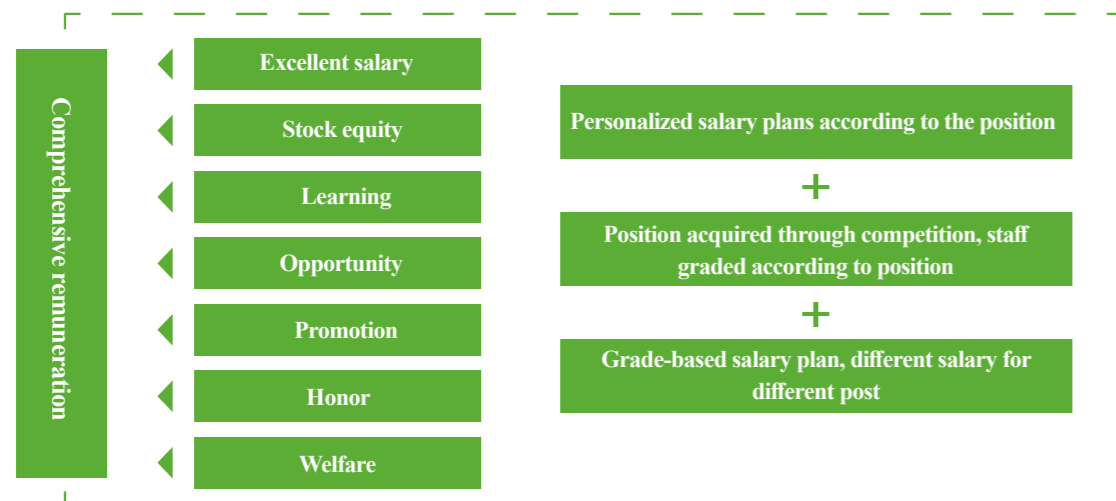
In the first two or three months after I retired from the army, I was confused about my future. I didn't know what job I was suitable for. Later, with the help of the Bureau of Veterans Affairs, I learned that Muyuan was recruiting veterans and they had a specific training scheme and promotion system for veterans, which could help us adapt to the new workplace and living environment as soon as possible. In December 2020, I passed the interview and joined Muyuan. My work was related to logistics. Although I was very busy in the beginning, I felt fulfilled every day. People around me are warm-hearted. They'd give me a hand whenever I encountered difficulties. Their kindness is just like sunshine and rain, which helps me develop faster.

In March 2021, I passed the selection and became the person in charge of the Special Operation Management Center of the Production Department. In July, 2021, there was an extremely rare flood in Henan and many places were affected by it. The company called on us to participate in the flood relief on the farms. We helped people in distress and donated money and supplies to them. I was deeply impressed by the unity of the Muyuan family and our sense of responsibility in serving society.

-- Li Jiyuan(A former People's Armed Police sergeant)

Innovative Incentives

Muyuan shares the fruits of development with its employees under the incentive principles: whoever creates value will be rewarded; whoever creates value first will be rewarded first; and whoever creates more value will be rewarded more. Muyuan implements a comprehensive remuneration system to motivate all employees to work hard and realize their self-fulfillment. This system includes salary, equity allocation, bonus, learning, promotion, honor and other welfare. In 2021, Muyuan optimized the remuneration plan for on-farm technicians to help them improve performance and earn more money. The average annual pay of Muyuan's employees in 2021 was RMB 98,652 yuan, with the average monthly pay of RMB 8,423 yuan for male employees and RMB 7,575 yuan for female. By the end of March 2022, Muyuan had implemented three employee stock ownership plans and three restricted stock incentive plans, with a total of more than 12,000 people holding shares.



Employee Development

Human resource is the core driving force for the sustainable development of Muyuan. Muyuan regards the construction of talent teams as the top priority. It has established and improved the training and promotion mechanism of employees and strengthened communication with consultant companies such as Mercer and McKinsey & Company. Muyuan continues to invest in employee training, expand their development space, and help them achieve a high-quality life.

Training and promotion

Employee training

Muyuan adheres to the ideas of combining selection with training, developing outstanding people with the tutelage of excellent people, and encouraging employees to empower each other. Muyuan continuously improves the training system and mechanism in accordance with the actual needs of employees and the production and operation, provides rich and diverse learning resources, and establishes an all-round growth and development plan for the employees. In 2021, Muyuan spent more than 128 million yuan on employee training, covering 100% of its employees, with an average training time of 75 hours for each employee.

New employee orientation training

Muyuan organizes the two-month large-scale enterprise culture training and regular cultural ice-breaking training to help new employees establish the core values of creating value, serving society, being honest, and promoting social progress, thus accelerating cultural integration and meeting job requirements. During the training, each department carries out business training to help new employees quickly understand the company's business and define their own career plans, growth path and promotion channel.



Onsite training for newly graduated employees in 2021

Targeted training for supervisors

Muyuan carries out management empowerment training based on business needs through on-site and video training methods, helping supervisors and managers grow rapidly and boosting the Company's strategic goals, expanding the development space of the management and helping them pursuit self-fulfillment. In 2021, Muyuan totally held 25 special training sessions, covering 3,720 of the supervisors and managers.

Vocational skills training

Muyuan has developed a vocational skills certification system and a training system for farms. It regularly carries out training on special topics including safe production, remuneration and welfare, corporate culture, and production operation through online training and certification examinations, offline practical operation certification, offline intensive training, and WeChat posts.

Muyuan has been carrying out online and face-to-face training for employees to improve employees' skills and help employees broaden career paths. In 2021, Muyuan started pilot projects for vocational skill certification. Seven subsidiaries of Muyuan have been filed as Social Training and Evaluation Organizations. More than 1,800 employees have obtained vocational grading certificates. This project will be promoted in Muyuan in the future.

Employee promotion

Muyuan has established a multi-dimensional performance management and promotion mechanism to evaluate employees' overall performance holistically and objectively and provide employees with a clear and well-defined path for promotion. The Company relates promotion channels to qualifications for each position and define requirements for each position or rank. Based on the principles of laying equal emphasis on post salary and performance salary, combining vertical and horizontal promotion, and combining step-by-step promotion and leapfrog promotion, Muyuan takes into consideration employees' personal qualities, occupational competencies, personal will, and job performance to develop inter-disciplinary talents, and promote the common sustainable development of employees and the Company.

High potential talents training

Since 2020, Muyuan initiated the high potential talents training program within the Company to provide new employees with a series of training activities such as high potential talent training camp, mentor dialogue, Group-level project practice, departmental project practice and foreign exchange and learning opportunities, so as to fully tap their leadership potential and lay a foundation for them to become leaders and decision-makers in their respective professional fields.

Employee communication

In Muyuan, we respect the suggestions and opinions of every employee. Muyuan has established various communication channels, and strengthened communication between the Company and employees to jointly build a harmonious working environment.

An intelligent online office system "Intelligent Muyuan Pro" was developed and launched in 2021. Big work communication groups were established for real-time information sharing and smooth communication.

In order to protect the rights and interests of employees, we set up real-name and anonymous feedback channels via WeChat, phone call, text message, employee symposium and other forms. Employees can choose to blow the whistle to the Audit Department through anonymous channels like site links and WeChat miniprogram. If employees report by email and phone call, we can still keep their information anonymous. Additionally, we regularly post links on the company office platform for employees to give feedback anonymously. Through the above channels, employees are free to express their opinions.

Muyuan also provides employees with special feedback channels to collect all kinds of problems such as food service, system operations, etc. Muyuan analyzes reasonable opinions and suggestions from employees on a monthly basis and makes corresponding measures, so as to encourage employees to point out any problems in their life and work and ensure timely solution of problems.

Informal communication

Team building Daily communication Cultural and sports activities

Formal communication

Phone call	Text message
Staff Congress	Job meeting
One-on-one interview	WeChat/ Intelligent Muyuan-DingTalk
Work report	Employee panel discussion
E-mail	Online investigation, video communication, etc.



Employee Feedback Poster

Muyuan Culture

Adhering to the concept of "developing employees with corporate culture and helping them achieve career success", Muyuan makes continuous efforts to develop and promote its culture. A variety of distinctive cultural activities such as the Pig Farming Festival, Apprenticeship Ceremony, Mother-Child Project and other activities are held to enhance the influence, affinity and cohesion of Muyuan culture.

Pig Farming Festival

Between June and September every year, there is a special festival for the Muyuan people -- Pig Farming Festival. The Pig Farming Festival aims to implement the management concept of exalting achievements, providing generous reward for innovations. This festival establishes the benchmark and energizes employees to continuously drive R&D innovation, achieve technological breakthroughs, and improve the profitability of the Company. On June 22, 2021, the Company held the 16th Pig Farming Festival and the commendation conference, themed "Creating Miracles: Seeking New Methods from Past Successes". At the conference, awards were granted in 13 categories, including performance, and innovation, with a total bonus of more than 21 million yuan.



The 16th Pig Farming Festival and the commendation conference

Apprenticeship ceremony

"Lend my shoulder to successors and help them achieve success!"

In 2021, Muyuan held the 13th Apprenticeship Ceremony, the theme of which was taught by both example and words, identifying good models, replicating success and establishing cost leadership. The Company allocated new recruits to excellent, upright, skillful and experienced employees ("master"). The master should provide guidance for his/her apprentice in both work and life, help them adapt to the working environment and master working skills so as to quickly grow competent. Up to now, Muyuan has successfully matched 25,000 masters for 70,000 apprentices.



The 13th Apprenticeship Ceremony

Mother-Child project

Muyuan people treat the children of any fellow workers as their own and wish every family to be happy. In order to care for the growth of the next generation, Muyuan holds two Mother-Child projects every year, providing employees' kids with winter and summer classes, summer camps, festival gifts and so on. By holding Mother-Child parties, Muyuan provides opportunities for children to show themselves, bring out their potential and enhance their confidence. Meanwhile, the meeting builds a platform of encouragement and mutual learning for parents and their kids to grow together.



The 33rd Mother-Child Party

Employee Welfare

Muyuan always regards its employees as families. Strictly following the Labor Contract Law of the People's Republic of China and relevant laws and regulations, Muyuan signs labor contracts with all employees and pays pension insurance, medical insurance, unemployment insurance, work injury insurance, maternity insurance, and housing provident funds for employees. In addition to the basic rights and interests, Muyuan makes continuous efforts to build comfortable working and living environment and provide good welfare for employees. Muyuan seeks to improve as the market standard improves, enhancing employees' sense of happiness and belonging in all respects including clothing, food, accommodation, transportation, daily essentials, health care and emotional support.

Clothing



Muyuan has taken seasons, work types, working conditions and other factors into full consideration and improved its workwear, so that they are not only comfortable to wear, but also bring them a sense of honor, happiness and devotion to work.



Employee workwear

Food



Muyuan has set up a food supply management system and introduced qualified suppliers to guarantee the quality of food materials and ensure that every employee can enjoy high-quality food. To improve farm workers' life quality, Muyuan has introduced prepared meals and deli meat products to farm sites. Furthermore, dish competitions are carried out regularly to make sure the employees enjoy their work meals.



Supply of fruits and vegetables on farms

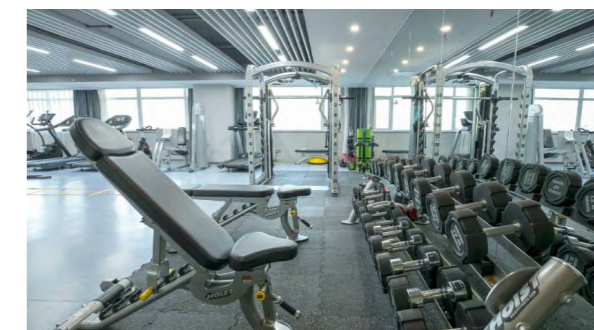
Accommodation



Muyuan has equipped dormitories with intelligent furniture. Entertainments, such as basketball courts and gyms are built to make it more comfortable to live in Muyuan farms.



Staff dormitory



Fitness center

Travelling



In order to improve employees' travelling experience, Muyuan developed a business travel system, through which employees can enjoy the negotiated price when they travel. Muyuan also signed key customer agreements with suppliers, launched car purchase discount and rental service for employees. In 2021, 898 cars were sold through the Company service, saving a total of about 2.6 million yuan for these employees.

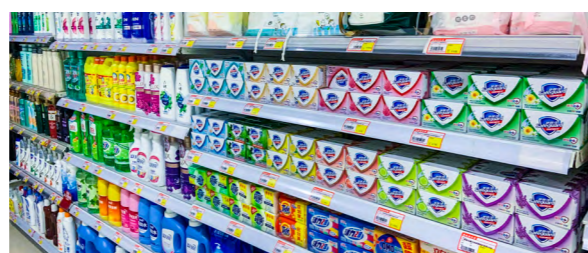


FAW Red Flag signing ceremony

Daily essentials



Muyuan has set up self-service supermarkets in farm sites to improve employee welfare in farms. Through the e-commerce platform Ju'ai Youxuan, Myuan provides high quality products with low cost delivered directly to the farms.



Supermarket

Health care



Muyuan attaches great importance to employee health management. It has established a health management system and cooperated with designated local medical institutions of all subsidiaries. Quick access to medical treatment has been available for employees for them to enjoy cheaper and more convenient medical services. Muyuan also provides employees with free weekly tests of blood pressure and heart rate and records the results into employees' health files, ensuring early detection and treatment of common diseases and safeguarding employee health. Muyuan set up entertainment facilities on farms and carries out healthy leisure activities such as spring sports meetings. Muyuan advocates a balance between work and rest to improve employees' physical fitness. Meanwhile, Muyuan organizes regular vaccinations, first-aid training and health knowledge publicity. Additionally, it provides commercial insurance for employees to give comprehensive protection.



Physical check-up

Emotional support



Education support: Muyuan cooperates with primary and middle schools to help kids of employees receive better education. In addition, Muyuan carries out activities such as the Muyuan Non-profit Education Project, the Mother-Child Project and summer camps to provide a platform for the development and growth of employees' children. Muyuan provides financial incentives for employees' children who are admitted to universities and helps them finish higher education. In 2021, a total of 2.645 million yuan was granted to 738 kids of employees as rewards and incentives. Over the recent years, incentives have been awarded to more than 2,000.

Mental health care: the Company pays attention to employees' mental health, offers them psychological counselling, and helps solve their problems in work and life timely to relieve their pressure.

Emotional care: Muyuan carries out the Matchmaker Program regularly for single employees. On May 20, 2021, Muyuan held a theme party (520 sounds like "I love you" in Chinese pronunciation) for headquarter's employees to socialize and make friends.

Holiday welfare: For the Mid-Autumn Festival and the Spring Festival, Muyuan gives free gift boxes such as pork products, moon cakes, nuts and fruits to employees. In 2021, Muyuan used coupons instead of gift boxes, providing more flexibility and diversity. Muyuan also provides special holidays for employees of minority ethnic groups.

Special team building activities: Muyuan organizes monthly themed team building activities based on farms to enhance relationship.



The 5th Spring Games in 2021



The "520" themed activity

Health and Safety

Muyuan adheres to the safe production policy of "safety first, prevention first and comprehensive treatment" and complies with the requirements of relevant laws and regulations such as the Production Safety Law of the People's Republic of China, the Law on the Prevention and Control of Occupational Diseases, and the Management Measures for Production Safety Accident Emergency Plan. In September 2021, Muyuan established the Leading Group of Production Safety Committee composed of senior executives as well as a Safety Management Department to deal with safety issues across the whole linked network of "departments - regions - subsidiaries - farms", and to achieve the "zero" accident goal.

Workplace safety management principles

In 2021, Muyuan established and improved the organizational structure of production safety management at all levels. Principles of "managers assume full responsibility" and "one-vote veto for safety issues" were established, ensuring that production safety is managed in a planned, systematic, level-based, and comprehensive way.

The Company has arranged production safety managers to advance safe production with the implementation of "five simultaneous actions" and handle accidents with "four never-let-goes". At the same time, the Company takes measures to ensure the effective use of funds invested in production safety to support safe production and lay a solid foundation for employees' health and safety.

Implementing "five simultaneous actions" when ensuring safe production

Planning, arranging, inspecting, reflecting and evaluating production simultaneously along with safe production.

Handling accidents with "four never-let-goes"

Never let go of any accidents whose causes remain unclear, never let go of any accountable people who are not punished for their faults, never let go of any unimplemented measures, and never let go of any employees who refuse to learn their lessons.

Safety management system

The Company has released the Safety Management System of Special Equipment, Management System of High-Risk Operations, Site Traffic Safety Management System and other systems and standards and implements them strictly.

Based on these documents, the Company carries out self-inspection, mutual inspection and random inspection in safety management sites to consolidate the foundation of safety management of all employees. Besides, it also supervises the implementation of safety management and standardizes the safety management work.

Strengthening safety consciousness

Muyuan carries out production safety publicity and training for all employees, including rules and regulations, SOPs, risk maps, and replay and review of sudden and high-incidence accidents. The system of working with licence for special operations and the system of pre-job training are strictly implemented.

In 2021, all kinds of production safety training covering all staff and special training for targeted staff had been effectively carried out. In addition, the Company, through the "Safe Muyuan" mini-program on DingTalk, warned and educated employees with negative cases and integrated production safety training into daily management to raise the awareness and knowledge, safeguarding their health and safety at work. In 2021, Muyuan carried out a total of 149 training sessions and 2,760 emergency drills with 1.08 million attenders.



Fire drill

Management of high-risk points

Muyuan conducted special identification and evaluation for high safety production risks, established a dual preventive mechanism for farms - "safety risk control and hidden trouble investigation and management". A safety management system has been put into use for identifying and controlling obvious and hidden risks comprehensively.

In order to avoid accidents in the process of hazardous operations which endanger the safety and health of employees, Muyuan has established an online approval system for hazardous operations to supervise the implementation of measures and take practical actions to protect the safety of employees. In addition to the dual preventive mechanism, an effective five-tier risk checklist for farm risk management and control has been developed to identify any hidden risk inside and outside pig farming units and prevent accidents.

Occupational health management

Muyuan earnestly implements the Opinions of the State Council on the Implementation of Healthy China Action and strictly abides by the Law on the Prevention and Control of Occupational Diseases, the Law on Workplace Safety and other relevant laws and regulations. Muyuan implements the occupational health management system strictly, conducts regular inspections on workers' behaviors in workplaces, and equips workers with PPEs. Warning signs and first-aid kits are provided at appropriate locations.

Muyuan has formulated and implements the Labor Protection Supplies Management System. Based on the work type and health risk level, Muyuan provides employees with general PPEs such as disposable masks, rubber gloves and goggles, and special equipment such as safety helmets, gas masks, safety belts, and gas detectors. In order to eliminate potential power hazards and maximize the health and safety of employees, Muyuan has installed intelligent power equipment on all farms. In 2021, Muyuan invested a total of more than 450 million yuan to create safe working environments and protect employees from occupational hazards.

Muyuan responded quickly to Covid-19 outbreaks, established relevant policies and systems for Covid prevention and control, and provided employees with masks, PCR tests and other services to safeguard the health and safety of employees. In 2021, no Muyuan employee was infected with Covid-19.

Chapter 5

Shouldering Responsibility and Creating a Better Future

Put knowledge into action to achieve benefits for society.

Get proactively involved with public welfare projects, and devote ourselves to promoting education and social and economic development. Adhere closely to our values and build platforms for sharing wealth.

-- Muyuan Basic Law

Highlights

Muyuan insists on building its main business into a pillar industry that underpins rural revitalization, offering job opportunities to more than 100,000 farmers. At the same time, it joins hands with upstream and downstream enterprises in the industrial chain to build an industrial ecosystem, thus creating more than 300,000 jobs and contributing to the rural revitalization strategy.

Having been carrying out a series of "Ju'ai Education Support" projects, Muyuan has supported 201 counties in 24 provinces /autonomous regions, sponsoring 43,000 college students and 500,000 primary and secondary school students, and rewarding 25,000 outstanding teachers.



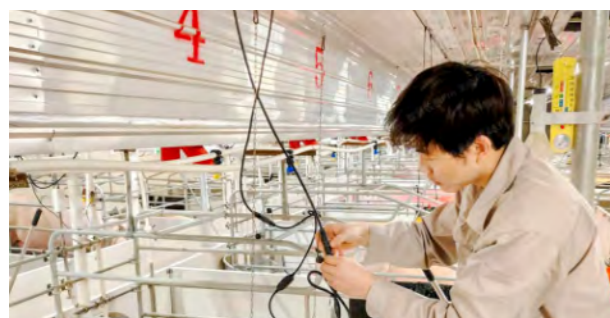
Agricultural technology service activity at Da'an Muyuan (Jilin province)

Rural Revitalization

As a Chinese saying goes, the agriculture is the foundation of a state; with a solid foundation, the state will be secure. On the basis of consolidating the achievements of poverty alleviation, MUYUAN improves its charitable service with its mission in mind, and fully integrates its development strategy into the national rural revitalization strategy. It has made much beneficial exploration concerning the combination of rural revitalization and pig farming. It promotes the high-standard farmland construction and contract agriculture, contributes to the revitalization of talents and ecology, and makes efforts in improving the infrastructure construction in rural areas, so as to boost the overall development of the region, help turn the great vision of "strong agriculture, beautiful countryside and rich farmers" into reality and achieve rural revitalization.

Building rural areas with thriving businesses

Business is the foundation of development. MUYUAN deeply integrates its business with national strategies and insists on making its main business of pig farming a pillar industry underpinning rural revitalization. MUYUAN has extended its business layouts to 25 provinces/autonomous regions/municipalities, covering 219 counties/districts, providing more than 100,000 farmers with jobs and training. At the same time, MUYUAN gives full play to its industrial advantages in the whole industry chain involving feed, breeding stock, pig raising and slaughtering, driving the integrated development of primary, secondary and tertiary industries in terms of grain planting, livestock equipment, logistics and transportation, etc. It joins hands with tens of thousands of upstream and downstream enterprises in the industry chain to build an industrial ecosystem, providing jobs for more than 300,000 people, activating the local economy and contributing to rural revitalization.



Farm technician adjusting and testing equipment



Workshops of suppliers

High-quality farmland

Relying on the existing crop-planting and pig-raising cycle, technical advantages and farmland pipeline facilities, MUYUAN takes use of the national strategy of rural revitalization and focuses on the development of high-quality farmland to further boost the development of the planting industry. It plans to convert 67,000 mu farmland in Neixiang County of Henan Province into digital demonstration areas for crop-planting and pig-farming cycle, so as to help build high-quality digital farmlands and realize the eight functional objectives of "standardized farmland, water and fertilizer integration, scientific monitoring, intelligent control, equipment modernization, large-scale operation, beautiful environment and standardized services", prospering agriculture through science and technology and ensuring national food security.

Persisting in government guidance and market operation, MUYUAN makes investment, supporting reward as well as subsidy policies and returns back the costs to farmers. Through such a financial model, MUYUAN carries out soil improvement and farmland leveling, and improves infrastructure construction of water, electricity, road, forestry on farmland, as well as the construction of an intelligent irrigation system, water and fertilizer integration facilities, ancillary facility of mechanization equipment, intelligent monitoring and management system, grain storage and drying facilities, etc., to create high-standard

digital agriculture that combines crop planting with pig farming, thus ultimately to achieve industrial integration and enrich farmers through digital technologies.

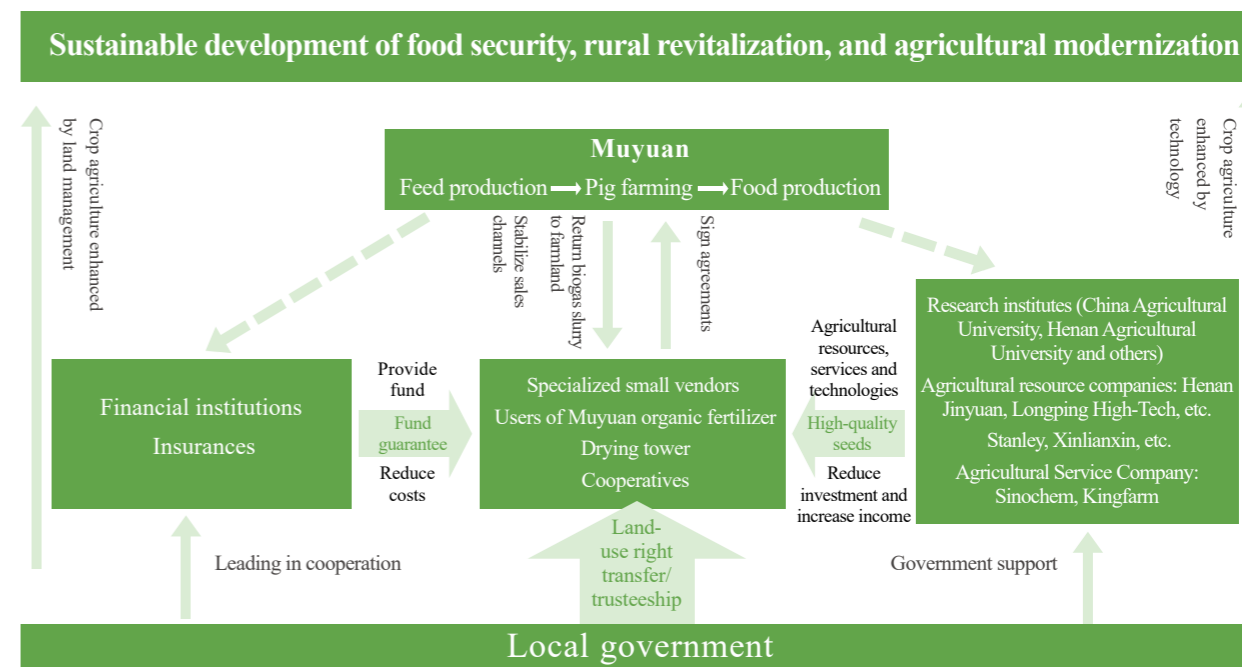
MUYUAN actively innovates the mechanism of connecting with farmers, helping farmers, benefiting farmers and enriching farmers. It has explored and established economic cooperatives, encouraging farmers to take shares in cooperatives using farmland management rights. The government invests in land consolidation and farmland infrastructure construction. MUYUAN's planting teams have signed the rural land-use rights transfer contract with cooperatives, so they can carry out the unified large-scale operation of the land.

MUYUAN makes efforts in building high-quality farmland and realizing the "six reductions, three increases and two improvements", as in, reductions of chemical fertilizer, water, pesticides, labor force, transportation and carbon emissions; increases in cultivatable land area, output, and benefits of all parties; and improvements of disaster resistance and cultivatable land quality; so as to liberate farmers from traditional fieldwork and transfer them to the secondary and tertiary industries without losing farming profits. As a result, economic, ecological and social benefits can be improved simultaneously.

By November 2021, 5,400 mu of wheat had been planted, with a expected dividend of more than 1,000 yuan per mu at the end of 2022.

Circular Economy Model – Contract Farming

MUYUAN actively contributes to a good industrial ecology and circular economy in the whole industrial chain. Through a multi-party cooperation mechanism for government, enterprises, research institutions, cooperatives and financial institutions, MUYUAN developed and formed a closed cycle of the modern agricultural industrial chain, achieving win-win results while increasing the production output and income of farmers. In the front end, biogas slurry is applied to farmland to reduce investment and guarantee income; in the back end, sales channels are stabilized and output is increased to improve farming enthusiasm. According to calculation results, the practice of recycling biogas slurry and returning it to farmland can benefit farmers by 253.13 yuan per mu and reduce inputs cost by 84 yuan per mu, guaranteeing the improvement of both grain quality and output. MUYUAN has formed a high-standard industrial chain that involves crop planting, pig farming and product processing, to promote the sustainable development of animal farming and crop agriculture, so as to ensure national food security and boost high-quality agricultural development and rural revitalization.



Gathering talents to activate rural innovation

Attracting college graduates to devote to agriculture

Rural revitalization is essentially the revitalization of talents. Muyuan leverages its leading role as a key enterprise, drives industry upgrading through technological innovation, and attracts more outstanding individuals to put their talent to the best use in the huge space of rural areas. At present, Muyuan has 40,000 graduates working in agriculture. Young, passionate and innovative, they are engaged in various sectors including feed nutrition R&D, pig house design, intelligent equipment R&D, pig raising, and environmental protection management. As a strong professional team with high comprehensive quality and great potential, they have contributed to the high-quality development of modern agriculture and rural revitalization.



Agronomists of Neihuang Muyuan in the field

Providing agricultural technical services and boosting harvest

The Company has 168 agronomists, of whom 29.44% hold Master's degrees and 60.41% hold Bachelor's degrees. Muyuan's agronomists have rich theoretical knowledge and professional skills. They provide agricultural technical services for farmers and organize knowledge and skill training in crop fertilization, pest control, rice seedling growing, grain storage and so on. In 2021, 8,334 agricultural technical training courses were given to 272,100 attendees in 9,281 villages. Through these activities, Muyuan has helped local farmers master planting technology, improve their ability to select good varieties of crops, control pest and plant new types of crops, so as to increase their output and income.



Shilin Muyuan in Yunnan province carries out agricultural technology training



Agricultural technology service



Ningjin Muyuan in Hebei province carries out agricultural knowledge competition

Creating a cultural atmosphere in rural areas

Rural culture revitalization is a spirit-fostering project and a crucial guarantee of rural revitalization. Muyuan continuously invests in promoting cultural revitalization and improving cultural facilities in rural areas, and actively cooperates with village committees. In rural areas, Muyuan has taken a series of measures to upgrade rural public cultural infrastructure, including rebuilding "Party and Mass" service centers, supporting performances and cultural products, providing supporting facilities for cultural activities, building libraries in public service centers, and building cultural squares. Muyuan also helped to maintain and repair historical revolutionary sites, so as to carry forward the "red" culture. By the end of 2021, Muyuan had invested 23.76 million yuan to help boost rural cultural revitalization.



Henan Opera "Pear Blossoms in the Old Path of the Yellow River" staged by the Henan Opera Troupe of Ningling County



Restoration project of revolutionary site of prefectural party committee in Shuidong District, Taikang County

Constructing a harmonious community with a pleasant living environment

Building a pleasant living environment is a key to rural revitalization. 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, house renovation, landscape projects and drinking water projects. By the end of 2021, MUYUAN had donated 95.66 million yuan, benefiting 1.79 million people from more than 520,000 households in 1,571 villages. MUYUAN is committed to providing villagers with a beautiful, safe and convenient living environment and improving their quality of life.



Community infrastructure constructed with help of Neixiang MUYUAN (Henan Province)



Community greening with help of Jianping MUYUAN (Liaoning Province)



Assistance in road construction for local community by Neixiang MUYUAN (Henan Province)



Street lights installed with help of Aohan MUYUAN in Inner Mongolia

Ju'ai Education Assistance

Adhering to the core value of "creating value and serving society", MUYUAN takes supporting education in rural areas as one of its obligations and has actively fulfilled its social responsibility. It has established a long-term mechanism for rewarding excellent students and providing financial aid, continued to carry out a series of Ju'ai education assistance projects, provided donations for rewarding students of all age and established an incentive mechanism for grassroots teachers. Up to end of March 2022, MUYUAN's education charity projects have benefited 201 counties of 93 cities in 24 provinces/autonomous regions with a total donation of 1.1 billion yuan. MUYUAN continues to carry out a series of educational assistance projects. Of which, the Golden Autumn Program has supported 43,000 students to higher education, the Spring Seedling Program has benefited 500,000 primary school students, and the Spring Rain Program has rewarded 25,000 excellent educators.



"By cultivating one excellent student, we can care for a family, sow a seed of hope, shape a future, and make the whole of society better off."

- Qin Yinglin

Spring Rain Program

As a Chinese saying goes, when making a hundred-year development plan, begin with the education; when making an education plan, begin with the teachers. MUYUAN promotes the Chinese tradition of respecting teachers, valuing education, and advocating wisdom and knowledge, responds to the call of the state, and continues to the development of rural education. We carry out teacher rewarding activities through the "Spring Rain Program", raise the enthusiasm of rural teachers in teaching, and improve the quality of rural education. In 2021, the program rewarded 2,303 excellent rural teachers with an amount of 4.25 million yuan, benefiting 16 counties and 11 cities in 8 provinces/autonomous regions.

This program has been carried out for 16 years since 2006, rewarding 25,483 outstanding teachers in total with 24.83 million, covering 38 counties in 12 provinces/autonomous regions.



Golden Autumn Program

A Chinese idiom says that it takes ten years to grow a tree but a hundred years to cultivate a generation. Cultivating talents is a long-term and arduous project. MUYUAN's Golden Autumn Program grants excellent students with financial aid to finish college. In 2021, the 14th Golden Autumn Program of MUYUAN rewarded 12,938 outstanding college students with an amount of 36.87 million yuan, covering 176 counties in 22 provinces.

Since its launch in 2008, the Golden Autumn Program has carried on for 14 years, and a total of 43,153 outstanding college students have received MUYUAN's scholarships and grants worthy of 114 million yuan. By far, students funded by MUYUAN have been found in more than 2,000 colleges and universities across the country. Most of them have been employed and made their own contributions to the country and society.



Shangcai Muyuan (Henan province) Golden Autumn Program scholarship distribution ceremony in Shangcai

Case

In addition to the "Ju'ai Education Assistance Project - Golden Autumn Program", Muyuan helps students in the whole process from college to work and brings outstanding talents to the society by assisting them to apply for student loans, setting up green channels for employment, assisting in applying for national tuition compensation and student loan reimbursement, and with the Nanyang local benefit "Zhuge talent subsidies".

Zhang Shuichang, an employee of Muyuan, was admitted to Henan University of Science and Technology in 2017, majoring in Software Engineering. He was supported by the Golden Autumn Program. During his study,

Muyuan continued to support and care for him. In 2021, he entered Muyuan as a . Net development engineer. Relying on his professional knowledge, he is using technology to change the industry and produce safe and high-quality pork.

The experience of Zhang Shuichang is only one of many cases. More than 10,000 students are helped by Ju'ai education assistance projects every year. After graduation, they play their role in all walks of life and contribute to society. Muyuan hopes that those supported students will become talents with pure characteristics and self-reliance, able to shoulder the great task of revitalizing the Chinese nation. Muyuan will also continue to support the development of education, make more contributions to promoting social progress and help realize the Chinese dream of the great rejuvenation of the Chinese nation.



Spring Seedling Program

Children are not only the hope of a family but also the future of our country and nation. The Spring Seedling Program aims to care for children in rural areas by donating school supplies such as school bags and stationery to stimulate their enthusiasm for learning and help them grow up happily.

In the Spring Seedling Program, volunteers bring science experiments and games into classrooms. Through these fun activities, children learn as they play and their confidence and communication skills have been improved.

In 2021, the Spring Seedling Program benefited 148 counties in 22 provinces and sent free school bags to 205,400 school children. Since the launch of the program in 2017, more than 502,000 gift packages have been distributed to school children in 2,935 communities and villages of 159 counties in 22 provinces. In the process of development, Muyuan actively undertakes social responsibility and unifies the community and the Company as one, sharing development fruits with the community and jointly creating a better future.



Ongniud Muyuan (Inner Mongolia) Spring Seedling Program activities



Zhengyang Muyuan (Henan province) Spring Seedling Program activities

Children's Dreams for the Future

"Children's Dreams for the Future" is a volunteer-based project. It enriches students' learning contents and forms through "creative classes" to make learning more fun and cultivate the spirit of innovation and exploration, so as to promote the all-round development of students.

On November 26, 2021, Muyuan's volunteer team went to Shuitian primary school in Ganzhang Town, Neixiang County to carry out the creative classes under the "Ju'ai Education Assistance Project - Children's Dreams for the Future". They also brought students learning supplies as gifts. A series of activities such as learning to use microscopes, experiencing "time travel" with VR headsets, flying drones, and leaf painting were carried out to broaden students' horizons, improve their scientific knowledge and practical ability, and stimulate their interest in learning.



Muyuan volunteers interacting with students



Muyuan volunteers demonstrating experiment

Public Services

Setting up charity platform

Muyuan has gradually improved its public service system as it carries out these campaigns. It has created a public service ecosystem supported by the government, social organizations and enterprises, in which everyone can participate. To support public welfare, Muyuan Industrial Group^③ established the Henan Muyuan Agriculture Development Foundation in 2021 with 20 million yuan to support poverty alleviation and education support in rural areas.

Volunteer service

In 2021, Muyuan established a volunteer team and recruited employees and college students to participate in volunteer activities and charitable service. Up to now, there have been 2,860 registered employee volunteers, and more than 3,800 college students and employees have volunteered in various public service activities. Their campaigns have reached 23 provinces/autonomous regions in China.



Respecting and caring for the elderly

The Chinese have a good tradition of respecting and taking good care of the elderly. On the Double Ninth Festival of 2021, the Muyuan labor union visited the Xiyanghong nursing home in Neixiang county, the Fuxing nursing home in Mashankou town, and the Kangle nursing home in Zhengwan community and brought groceries such as eggs, bread, rice, and flour to the elderly residents to show our care.



^③ Some entities out of the scope of the CSR report contributed to Muyuan's public service system as well. Specifically, Muyuan Industrial Group was involved in the decision making of major issues.

Disaster Relief

Standing Together through Storm and Stress

On July 20, 2021, Zhengzhou was hit by a rare and extremely heavy rainstorm suddenly. Muyuan was fully engaged in the emergency flood relief. It immediately established the emergency control headquarters, organized rescue teams and prepared supplies.

Muyuan donated 100 million yuan to Henan Charity General Federation for flood control and disaster relief. It also assisted 13 severely affected areas including Zhengzhou City, Zhoukou City, Ruzhou City and Kaifeng City in flood relief, mass assistance, disease control and treatment, and reconstruction. At the same time, its subsidiaries in Zhoukou, Xuchang, Anyang and other places donated drinking water, foods, canoes, water pumps and other supplies to the local communities to contribute to flood control and relief.



Combating Flood and Helping Farmers

In 2021, the continuous heavy rainfall in many parts of the country seriously affected people's life and production. Crops in many places were seriously damaged. Muyuan rose up to challenges and went all out in flood fighting and relief to support the production and life of the people in flood-stricken areas.

Floods occurred in Caoxian, Shandong Province and Yongji, Shanxi Province. Crops including corn, peanut, asparagus and pepper planted by farmers were flooded by rain. Muyuan acted quickly and sent personnel to help farmers digging water channels, provide water pumps, fire hoses and other equipment to dredge river channels and help village committees to repair damaged houses.



Combating flood at Yanling Muyuan

Honors and awards

- In February 2021, Muyuan was awarded the "National Advanced Group in Poverty Alleviation".
- In April 2021, Muyuan was awarded the "National Advanced Private Enterprise in Employment and Social Security".
- In September 2021, Muyuan was awarded the 11th "China Charity Award".
- In October 2021, Muyuan was awarded the "Outstanding Contribution Award for Flood Relief in Henan Province".
- In October 2021, Muyuan won the title of "Most Charitable Donor" in the first "Henan Charity Star" program.

Outstanding Contribution

Promoting Low-Protein Diet

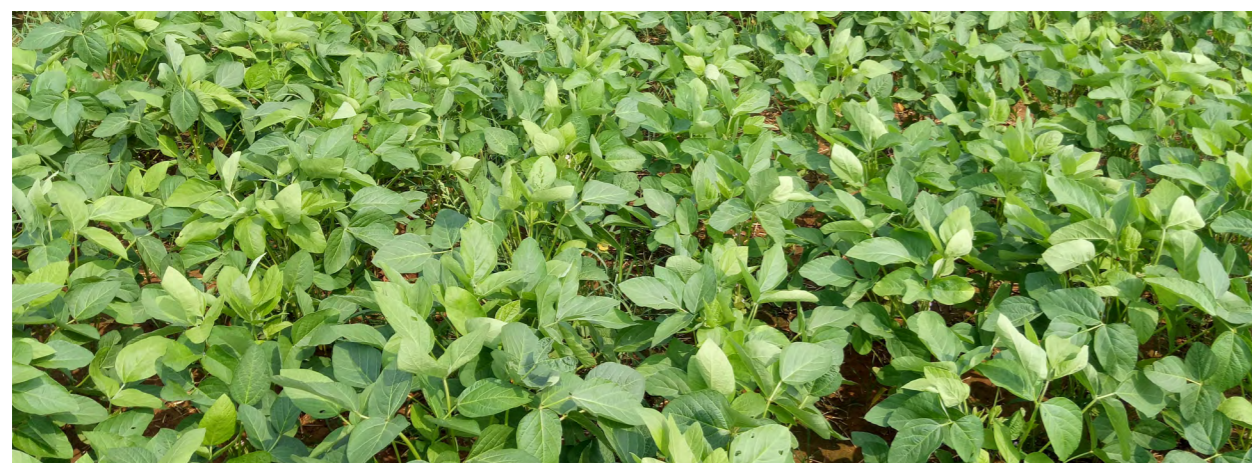
Muyuan began its initial test of low-protein diet in 1992 and popularized its application in 2000. The use of soybean meal has been reduced by eliminating non-essential amino acids in the feed and adding appropriate types and quantities of industrial fermentation amino acids without affecting the growth performance and quality of pigs. After more than 20 years of persistent efforts, in 2020, Muyuan's annual soybean meal consumption accounted for 9.8%, about half of the industry consumption (according to the statistics of the Ministry of Agriculture and Rural Affairs in the same year, China's average pig consumption of soybean meal accounted for 17.7%).

Since 2011, Muyuan has shared the R&D and application of low-protein diet at industry conferences for many times, calling on the industry to promote low-protein diet. Muyuan also included "promoting the application of low protein diet" into its proposal to the National People's Congress.

In May 2021, Qin Yinglin, the chairman of Muyuan Foods, publicly shared the related data of Muyuan's low-protein diet when making a report at the 7th Global Pig Industry Forum.

In August 2021, the Ministry of Agriculture and Rural Affairs responded to the proposal No. 7740 "Promoting the Application of Low-Protein Diet", which was brought up by Qin Yinglin, a deputy to the 13th National People's Congress: We will continue to improve the nutrition database of feed ingredients, strengthen the coordination of policies to support amino acid production, advance the application of low-protein diet, further reduce the use of soybean meal in breeding industry, and promote the high-quality development of animal husbandry.

The application of low protein diet not only has practical economic benefits for enterprises, but also has great significance for the industry and the country. According to our calculation, the application of low protein diet formula can save 31.4kg of soybeans and reduce 1.5kg of nitrogen emission per pig. If the low protein diet is promoted and applied in the whole country^④, it can save 20 million tonnes of soybeans and 150 million mu of land from the social perspective. In ecological terms, nitrogen emission will be reduced by 980,000 tonnes nationwide.



Soybean seedlings nearby the Fugou Muyuan farm

④ : The annual pig output is counted as 650 million head, and the average proportion of soybean meal in the pig feed is counted as 17.7%.

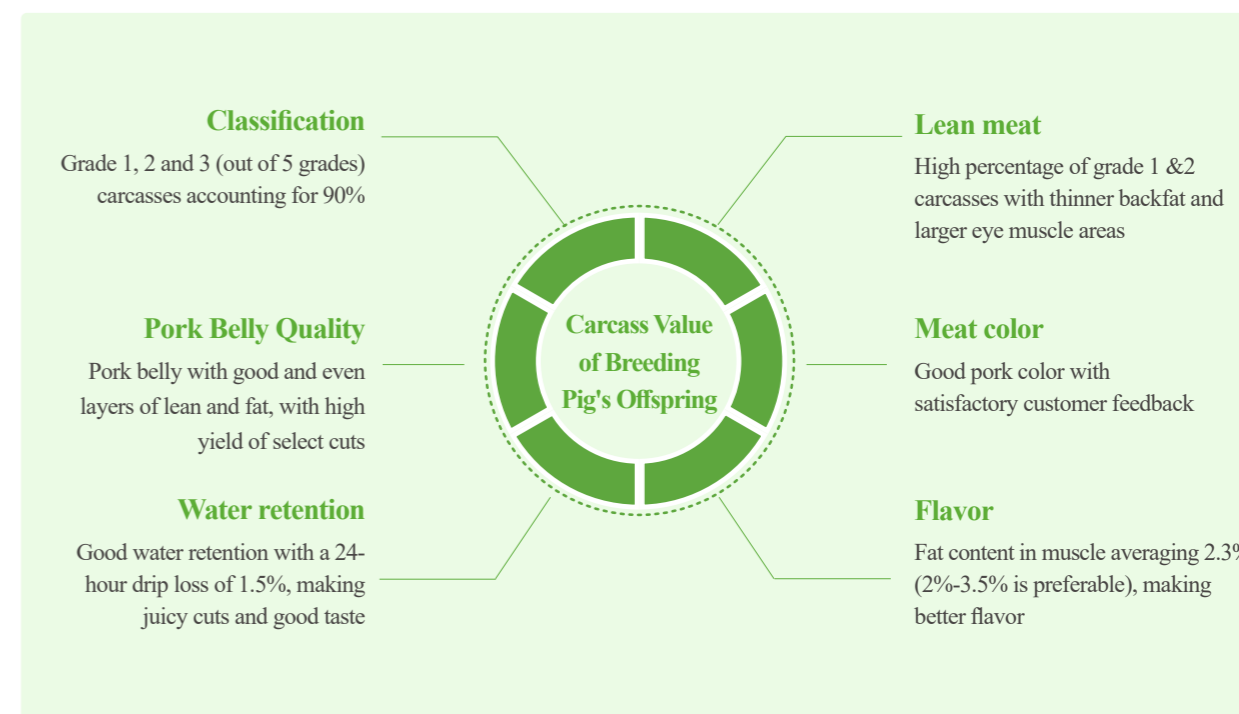
Providing Fine Breeding Pigs for the Society

Muyuan's nucleus herds size ranks the top in China, which enables the Company to no longer rely on importing breeding pigs. By 2021, Muyuan had set up 11 breeding companies in provinces such as Henan, Jiangxi, Shaanxi, Hubei to continuously promote the large-scale development of genetic breeding.

Since 1998, Muyuan has set up the "Seed Plan" of pig breeding. Muyuan has always been guided by market demand and has been implementing independent breeding and value breeding for more than 20 years. It has kept the excellent domestic breeds and introduced the good foreign breeds. Muyuan is committed to developing pig breeds that are more suitable in China.

Muyuan has formed a two-way rotational breeding system, and continuously selected excellent genes by means of performance measurement, performance selection and selective mating, so as to improve the reproductive performance and growth performance of breeding pigs. The system has developed breeding pig varieties with stable genetic performance, strong adaptability and better comprehensive benefits, providing consumers with pork of high lean meat rate, better fat-lean layers and tender taste.

Since the outbreak of African Swine Fever, Muyuan's breeding herds have not only satisfied its own development needs, but also contributed to the recovery of industrial production capacity. From 2020 to 2021, the Company provided 920,000 high-quality breeding pigs to the society. In addition, Muyuan also offered affordable breeding pigs at the price of market pigs, which saved cost for customers and promoted the development of the industry.



Looking Forward

Creating value and serving society are the very foundations of an enterprise and its development.

Adhering to its core value of "creating value, serving society, being honest and promoting social progress", Muyuan has been focusing on the pork industry, providing high-quality pork products, and continuously making innovations and breakthroughs.

Looking into the future, a new era has come: intelligent science and technology, rural revitalization, high-quality development, and carbon emission reduction. Muyuan is ready to embrace the new era and contribute to a better quality of life and a stronger China. Our platform will attract talents, and the talents will promote innovation, and innovation-led technology will lead to a better-equipped industry, which will support China as a major pork producer.

Leading innovation: Muyuan will focus on the pork industry and give full play to its advantages of fully independent farming and whole-chain covering operation. It will create a digitized and intelligent pork production system integrating good breeds, good feeds, good farming and good slaughtering. Empowered by leading technologies, Muyuan will continue to produce high-quality pork for consumers.

Coordinated development: Muyuan will open up its platform for all sectors of society to join with it in supporting the economies of suburban areas. Muyuan will share its achievements by promoting public service such as rural education, infrastructure construction as well as supporting the vulnerable, and contribute to the rural revitalization of China.

Green production: Muyuan will stick to a sustainable operation driven by independent innovations and breakthroughs. It will set higher standards for clean production and promote high-quality development of the pork industry.

Opening up and sharing: Muyuan will establish a shared industrial platform of pork production. It will promote opening up and cooperation in technology, management and funds, and create a good industrial ecology and commercial civilization with its business partners and peers, to contribute to the strength of the Chinese pork industry.

Staying true to our original aspiration and founding mission, Muyuan will forge ahead focusing on the pork industry, and will contribute to industrial development, to provide customers with quality-assured pork and to help them enjoy a richer life.

GRI Index

GRI Standards	Disclosed items	Section
Foundation	GRI 101: Foundation	About the Report
Organizational Profile	102-1 Name of Organization	Company Profile
	102-2 Activities, brands, products, and services	Company Profile
	102-3 Location of headquarters	Company Profile
	102-4 Location of operations	Company Profile
	102-5 Ownership and legal form	Refer to Annual Report
	102-6 Markets served	Company Profile
	102-7 Scale of the organization	Company Profile
	102-8 Information on employees and other workers	About Muyuan Creating Happy Life for Employees
	102-9 Supply chain	Jointly Building Commercial Civilization
	102-10 Significant changes to the organization and its supply chain	Refer to Annual Report
	102-11 Precautionary Principle or approach	Responsibility Strategy and SDGs
	102-12 External initiatives	/
	102-13 Membership of associations	/
Strategy	102-14 Statement from senior decision-maker	Message From the Chairman
	102-15 Key Impacts, risks, and opportunities	Message From the Chairman Dealing with Risks and Seizing Opportunities
Ethics and Integrity	102-16 Values, principles, standards, and norms of behaviour	About Muyuan
	102-17 Mechanisms for advice and concerns about ethics	About Muyuan
Governance	102-18 Governance structure	Corporate Governance
	102-19 Delegating authority	/
	102-20 Executive-level responsibility for economic, environmental, and social topics	Responsibility Management
	102-21 Consulting stakeholders on economic, environmental, and social topics	Communication with Stakeholders
	102-22 Composition of the highest governance body and its committees	Corporate Governance
	102-23 Chair of the highest governance body	Refer to Annual Report
	102-24 Nominating and selecting the highest governance body	Refer to Annual Report

GRI Standards	Disclosed items	Section
Governance	102-25 Conflicts of interest	Refer to Annual Report
	102-26 Role of highest governance body in setting purpose, values, and strategy	Responsibility Management
	102-27 Collective knowledge of highest governance body	Responsibility Management
	102-28 Evaluating the highest governance body's performance	Refer to Annual Report
	102-29 Identifying and managing economic, environmental, and social impacts	Responsibility Management
	102-30 Effectiveness of risk management processes	Refer to Annual Report
	102-31 Review of economic, environmental, and social topics	Materiality Assessment Matrix
	102-32 Highest governance body's role in sustainability reporting	Responsibility Management
	102-33 Communicating critical concerns	Corporate Governance
	102-34 Nature and total number of critical concerns	Corporate Governance
	102-35 Remuneration policies	Refer to Annual Report
	102-36 Process for determining remuneration	/
	102-37 Stakeholders' involvement in remuneration	/
	102-38 Annual total compensation ratio	/
102-39 Percentage increase in annual total compensation ratio	/	
Stakeholder Engagement	102-40 List of stakeholder groups	Communication with Stakeholders
	102-41 Collective bargaining agreements	Creating Happy Life for Employees
	102-42 Identifying and selecting stakeholders	Communication with Stakeholders
	102-43 Approach to stakeholder engagement	Communication with Stakeholders
Reporting Practice	102-44 Key topics and concerns raised	Communication with Stakeholders
	102-45 Entities included in the consolidated financial statements	About the Report
	102-46 Defining report content and topic Boundaries	About the Report
	102-47 List of material topics	Muyuan's Material Issues
	102-48 Restatements of information	No such matter occurs
	102-49 Changes in reporting	About the Report Materiality Assessment Matrix
	102-50 Reporting period	About the Report
	102-51 Date of most recent report	About the Report
	102-52 Reporting cycle	About the Report
	102-53 Contact point for questions regarding the report	Stakeholder Feedback
Reporting Practice	102-54 Claims of reporting in accordance with the GRI Standards	About the Report
	102-55 GRI Content Index	GRI Index
	102-56 External assurance	/

GRI Standards	Disclosed items	Section
Management approach	103-1 Explanation of the material topic and its Boundaries	Communication with Stakeholders
	103-2 The management approach and its components	Communication with Stakeholders Responsibility Management
	103-3 Management approach disclosures	Communication with Stakeholders
GRI 201 Economic Performance	201-1 Direct economic value generated and distributed	About Muyuan
	201-2 Financial implications and other risks and opportunities due to climate change	Risks and Opportunities
	201-3 Defined benefit plan obligations and other retirement plans	/
	201-4 Financial assistance received from government	/
GRI 202 Market Presence	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	/
	202-2 Proportion of senior management hired from the local community	/
GRI 203 Indirect Economic Impacts	203-1 Infrastructure investments and services supported	Shouldering Responsibility and Creating a Better Future
	203-2 Significant indirect economic impacts	Topic 1 Technological Innovation Boosts Industry Upgrading Topic 2 Industrial Chain Extension and Rapid Development of Slaughtering Business Jointly Building Commercial Civilization Shouldering Responsibility and Creating a Better Future
GRI 204 Procurement Practices	204-1 Proportion of spending on local suppliers	Jointly Building Commercial Civilization
GRI 205 Anti-corruption	205-1 Operations assessed for risks related to corruption	Honesty and Integrity
	205-2 Communication and training on anti-corruption policies and procedures	Honesty and Integrity
	205-3 Confirmed incidents of corruption and actions taken	Honesty and Integrity
GRI 206 Anti-competitive Behavior	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	/
GRI 207 Tax	207-1 Approach to tax	/
	207-2 Tax governance, control, and risk management	/
	207-3 Stakeholder engagement and management of concerns related to tax	Communication with Stakeholders
	207-4 Country-by-country reporting	/
GRI 301 Materials	301-1 Materials used by weight or volume	/
	301-2 Recycled input materials used	/
	301-3 Reclaimed products and their packaging materials	/
GRI 302 Energy	302-1 Energy consumption within the organization	Cleaner Production
	302-2 Energy consumption outside of the organization	/
	302-3 Energy intensity	Cleaner Production
	302-4 Reduction of energy consumption	Cleaner Production
	302-5 Reductions in energy requirements of products and services	Cleaner Production

GRI Standards	Disclosed items	Section
GRI 303 Water and Effluents	303-1 Interactions with water as a shared resource	Jointly Promoting Sustainability
	303-2 Management of water discharge-related impacts	Jointly Promoting Sustainability
	303-3 Water withdrawal	Jointly Promoting Sustainability
	303-4 Water discharge	Jointly Promoting Sustainability
	303-5 Water consumption	Jointly Promoting Sustainability
GRI 304 Biodiversity	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Not applicable
	304-2 Significant impacts of activities, products, and services on biodiversity	Jointly Promoting Sustainability
	304-3 Habitats protected or restored	Not applicable
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	Not applicable
GRI 305 Emissions	305-1 Direct (Scope 1) GHG emissions	Topic 3 Promoting Green Operations to Combat Climate Change
	305-2 Energy indirect (Scope 2) GHG emissions	Topic 3 Promoting Green Operations to Combat Climate Change
	305-3 Other indirect (Scope 3) GHG emissions	Topic 3 Promoting Green Operations to Combat Climate Change
	305-4 GHG emissions intensity	Topic 3 Promoting Green Operations to Combat Climate Change
	305-5 Reduction of GHG emissions	Topic 3 Promoting Green Operations to Combat Climate Change
	305-6 Emissions of ozone-depleting substances (ODS)	Topic 3 Promoting Green Operations to Combat Climate Change
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Topic 3 Promoting Green Operations to Combat Climate Change
GRI 306 Effluents and Waste	306-1 Waste generation and significant waste-related impacts	Jointly Promoting Sustainability
	306-2 Management of significant waste-related impacts	Jointly Promoting Sustainability
	306-3 Waste generated	Jointly Promoting Sustainability
	306-4 Waste diverted from disposal	Jointly Promoting Sustainability
	306-5 Waste directed to disposal	Jointly Promoting Sustainability
GRI 307 Environmental Compliance	307-1 Non-compliance with environmental laws and regulations	Jointly Promoting Sustainability
GRI 308 Supplier Environmental Assessment	308-1 New suppliers that were screened using environmental criteria	Jointly Building Commercial Civilization
	308-2 Negative environmental impacts in the supply chain and actions taken	Jointly Building Commercial Civilization
GRI 401 Employment	401-1 New employee hires and employee turnover	Creating Happy Life for Employees
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Creating Happy Life for Employees
	401-3 Parental leave	Creating Happy Life for Employees
GRI 402 Labor/Management Relations	402-1 Minimum notice periods regarding operational changes	No incidents of noncompliance

GRI Standards	Disclosed items	Section
GRI 403 Occupational Health and Safety	403-1 Occupational health and safety management system	Health and Safety
	403-2 Hazard identification, risk assessment, and incident investigation	Health and Safety
	403-3 Occupational health services	Health and Safety
	403-4 Worker participation, consultation, and communication on occupational health and safety	Health and Safety
	403-5 Worker training on occupational health and safety	Health and Safety
	403-6 Promotion of worker health	Health and Safety
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Health and Safety
	403-8 Workers covered by an occupational health and safety management system	Health and Safety
	403-9 Work-related injuries	Health and Safety
	403-10 Work-related ill health	Health and Safety
GRI 404 Training and Education	404-1 Average hours of training per year per employee	Employee Development
	404-2 Programs for upgrading employee skills and transition assistance programs	Employee Development
	404-3 Percentage of employees receiving regular performance and career development reviews	Employee Development
GRI 405 Diversity and Equal Opportunity	405-1 Diversity of governance bodies and employees	Introducing Talens
	405-2 Ratio of basic salary and remuneration of women to men	Introducing Talens
GRI 406 Non-discrimination	406-1 Incidents of discrimination and corrective actions taken	Introducing Talens
GRI 407 Freedom of Association and Collective Bargaining	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	/
GRI 408 Child Labor	408-1 Operations and suppliers at significant risk for incidents of child labor	Introducing Talens
GRI 409 Forced or Compulsory Labor	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labour	Introducing Talens
GRI 410 Security Practices	410-1 Security personnel trained in human rights policies or procedures	Not applicable
GRI 411 Rights of Indigenous Peoples	411-1 Incidents of violations involving rights of indigenous peoples	Not applicable
GRI 412 Human Rights Assessment	412-1 Operations that have been subject to human rights reviews or impact assessments	Not applicable
	412-2 Employee training on human rights policies or procedures	Not applicable
	412-3 Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	Not applicable

GRI Standards	Disclosed items	Section
GRI 413 Local Communities	413-1 Operations with local community engagement, impact assessments, and development programs	Jointly Promoting Sustainability Shouldering Responsibility and Creating a Better Future
	413-2 Operations with significant actual or potential negative impacts on local communities	No such operation
GRI 414 Supplier Social Assessment	414-1 New suppliers that were screened using social criteria	Jointly Building Commercial Civilization
	414-2 Negative social impacts in the supply chain and actions taken	Jointly Building Commercial Civilization
GRI 415 Public Policy	415-1 Political contributions	Not applicable
GRI 416 Customer Health and Safety	416-1 Assessment of the health and safety impacts of product and service categories	Dedication to Food Safety
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	No such operation
GRI 417 Marketing and Labeling	417-1 Requirements for product and service information and labeling	Improving Customers' Experience
	417-2 Incidents of non-compliance concerning product and service information and labeling	Improving Customers' Experience
	417-3 Incidents of non-compliance concerning marketing communications	No incidents of noncompliance
GRI 418 Customer Privacy	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	Improving Customers' Experience
GRI 419 Socioeconomic Compliance	419-1 Non-compliance with laws and regulations in the social and economic area	No incidents of noncompliance

Stakeholder Feedback

Thank you for reading the "Corporate Social Responsibility Report 2021 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.

- Do you think this report provides the information you need to know?
 Yes Neutral No
- Do you think this report comprehensively reflects the company's economic, social and environmental performance?
 Yes Neutral No
- Do you think this report fully responds to the expectations and demands of the Company's stakeholders?
 Yes Neutral No
- Do you think the quantitative information disclosed in this report is objective, fair and effective?
 Yes Neutral No
- Do you think this report is coherent and easy to understand?
 Yes Neutral No
- Do you think the layout design of this report helps you understand the relevant information?
 Yes Neutral No
- Please feel free to share any additional comments, suggestions, or feedback below.

- **Creating value**
- **Serving society**
- **Being honest**
- **Promoting social progress**

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