- Creating value
- Serving society
- Self-discipline and self-confidence
- Promoting social progress

Sustainability Report 2019

Muyuan Foods Co., Ltd.



Muyuan Foods Co., Ltd.

Headquarters Address:
Longsheng Industrial Park, Wolong District, Nanyang City, Henan Province, China.
Post Code : 473000
General Manager's Office : 0377-65233888
Security Department : 0377-66100053
Website : http://www.muyuanfoods.com
E-mail : office@muyuanfoods.com

cninf 巨潮资讯 www.cninfo.com.cn

About the Report

Muyuan Foods Co., Ltd. (hereinafter referred to as "Muyuan", "Muyuan Co., Ltd.", the "Company" or "we") hereby issues the Sustainability Report 2019 (the "Report") to describe Muyuan's policies, measures, actions and achievements in sustainable development to stakeholders.

Scope of the Report

Unless otherwise specified, the Report covers Muyuan Foods Co., Ltd. and its subsidiaries during the period from 1 January 2019 to 31 December 2019. Description in some parts of the Report goes beyond the above period.

Report Reference

The Report is prepared in accordance with the Sustainability Reporting Standards of the Global Reporting Initiative ("GRI Standards") issued by the Global Sustainability Standards Board ("GSSB"), the CASS CSR 4.0 issued by the Chinese Academy of Social Sciences ("CASS"), the Social Responsibility Standards ("ISO 26000") issued by the International Standards Organization ("ISO") and other domestic and foreign CSR reporting standards and guidelines, so as to meet applicable standards for disclosing sustainable development information, with consideration to the industry background and features of the Company.

Report Availability

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

Notes on the Report's data

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

Currency

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

cninf 巨潮资讯 www.cninfo.com.cn

Contents

About the Report 01

Chairman's Statement 04

About Muyuan 06

Company Profile 08

Corporate Governance 12

Responsibility Management 14

Social Responsibility Strategy 16

Social Responsibility Management Framework 17

Materiality Assessment 18

Stakeholder Communication 20

Topic 1: Contributing to COVID-19 Control 21

Topic 2: Further Promotion of Targeted Poverty Alleviation 25

Topic 3: Industrial Upgrading of ASF Prevention 31

Topic 4: Technology Innovation, Leading the Upgrade 37

Food Safety First, Providing High Quality Pork 42

Guaranteeing Safety and Quality 44

Committing to Animal Welfare 50

Circular Economy, Realising Sustainable Development 52

Innovative Environmental Management Concept 54

Building Circular Economy 56

Work Together, Sharing the Value of the Industrial Chain 62

Strengthening Supplier Management 64

Delivering Sustainable Value 65

Co-constructing Industrial Chain Ecology 66

Enhancing Customer Experience 69

Muyuan Ju'ai, Supporting Public Welfare 72

Assisting in Education by the Ju'ai Project 74

Supporting Community Construction 77

People-Oriented, Contributing to Their Happiness 80

Introducing Talented People 82

Guaranteeing Health and Safety 83

Innovating Incentives 84

Supporting Employee Development 85

Enjoying Abundant Life 86

Outlook 89

Muyuan Social Responsibility Index 90

GRI Standards Index 93

CASS-CSR 4.0 Index 99

Stakeholders Feedback Form 101

cninf 巨潮资讯 www.cninfo.com.cn

Chairman's Statement

"Creating value, serving society, self-discipline and self-confidence, and promoting social progress" comprise the core cultural values of Muyuan. As a large-scale agricultural enterprise born and raised in "agriculture, rural areas and farmers", Muyuan takes creating social value as the ultimate goal. "Serving people with safe pork and letting them enjoy a rich life" is the motive of Muyuan's continuous development and expansion. As of the end of 2019, Muyuan has expanded its business to 18 provinces and regions across China and is making concerted efforts with over 50,000 members to realise its goal.

In 2019, against the backdrop of the ongoing African swine fever ("ASF") outbreak, Muyuan was commissioned to develop a set of decontamination techniques to comprehensively detect and precisely eliminate the virus, to safeguard the national hog production and supply. Amid the deepening of poverty alleviation, Muyuan makes full use of its industrial advantages to explore a long-term mechanism for steady poverty alleviation and contribute to the fight against poverty. This year, the "responsibility" of Muyuan is endowed with more profound significance.

In early 2020, in the face of the outbreak of Coronavirus Disease 2019 ("COVID-19") and difficulties in the disease prevention and control, Muyuan responded very quickly. Muyuan injected strong confidence and strength to combat the pandemic through proactively assisting local governments in fighting the pandemic with all-out efforts, donating 200 million immediately, and taking advantage of global procurement, technology research and development ("R&D") and e-commerce platforms. From headquarters to local subsidiaries, a host of Muyuan members have devoted themselves to the war against COVID-19.

Focusing on the principal business to provide people with safe pork

In response to the "13th Five-Year" Development Plan, Muyuan sticks to market-side positioning and gives full support to national supply-side structural reform. While continuously expanding our pig farming scale, we achieved controllable and traceable management of pork products across the whole industrial chain to ensure food safety. In 2019, the Company sold 10,250,000 pigs, fully ensuring market supply.

Developing technologies to lead industry transformation and upgrading

Muyuan is committed to innovation. Through iterative development of hog houses and phased R&D of feed, veterinary and environmental protection technologies, the Company registers visible growth in the course of continuous innovation and is upgrading its pig farming to be information-based intelligence-based. Equipment upgrading, intelligent and connected vehicle ("ICV"), AI application, and interdisciplinary talents are reshaping the industry development mode.

Making concerted efforts to fight for poverty alleviation

Muyuan actively serves as the pacesetter to address the issues of "agriculture, rural areas and farmers", and incorporates the national strategy of poverty alleviation into the Company's development strategy, aiming to make the pig industry to be the largest poverty-relief industry in China. As of the end of 2019, Muyuan has invested 22.82 billion in poverty-relief programmes in 71 national and provincial poverty-stricken counties, creating over 30,000 jobs therein. The "5 +" asset-based income poverty alleviation model has helped and documented about 140,000 poor households and 350,000 poor people in 49 counties of 12 provinces in China, bringing them RMB 540 million income.

Prioritising environmental protection to preserve lush mountains for the future

Muyuan regards environmental protection as one of the Company's priorities and upholds the development principle of " no cost passed on to others, no shirking of responsibility and no hidden hazards" . Muyuan has devoted itself to "zero emissions, no hidden hazards, no odour, smog reduction and carbon emissions reduction" by introducing the idea of "Five Steps of Environmental Protection" , constructing a sound environmental management mechanism, building a digital intelligent environmental protection platform, and leading innovation in environmentally friendly processing technologies. Nowadays, Muyuan's average water consumption, carbon emission and air consumption for pig farming is less than the industry average, and we have world leading anti-odour technology. Muyuan vigorously promotes the circular economic model of "breeding - biogas manure - green agriculture", assisting in rural revitalisation and the building of beautiful China.

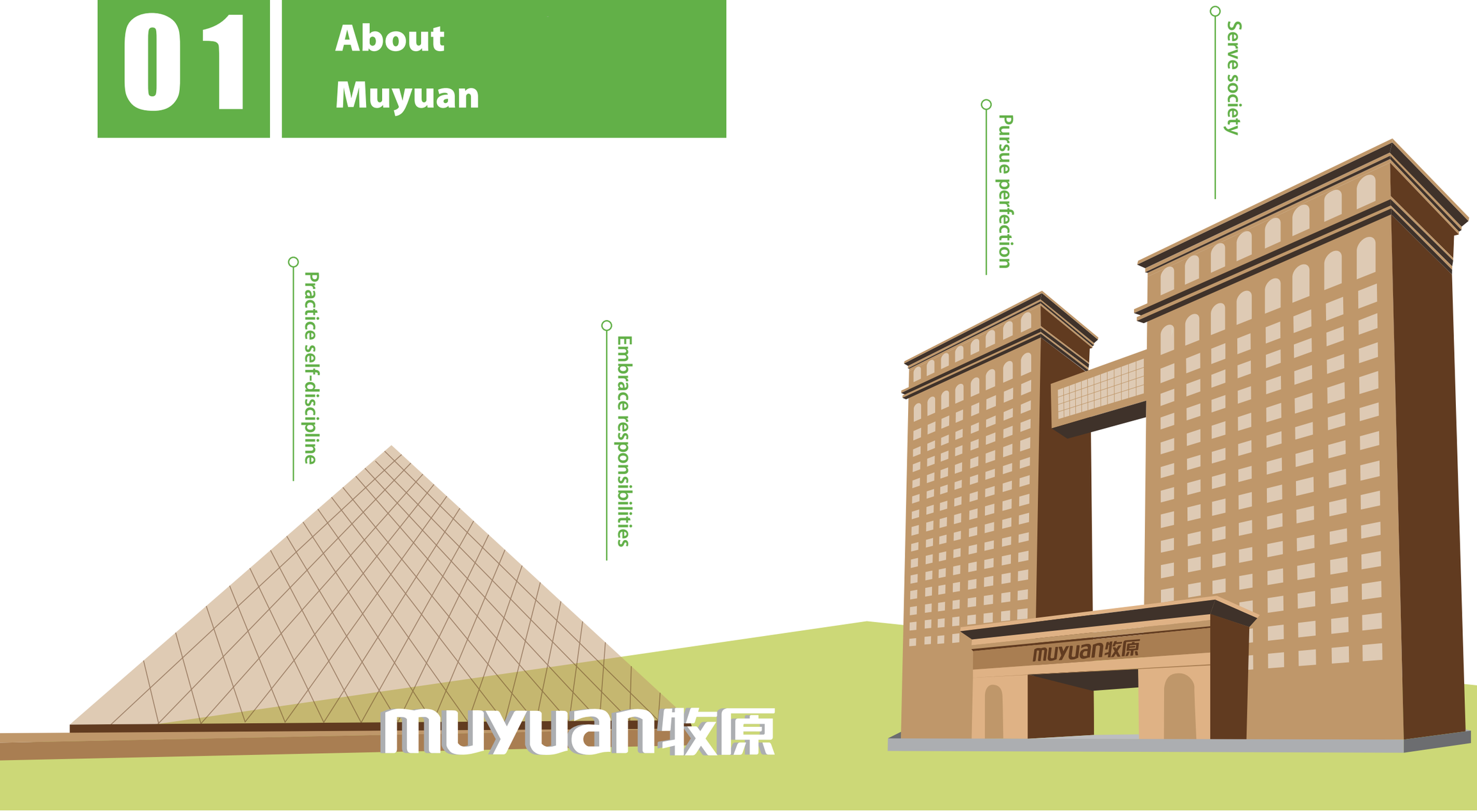
Muyuan walks steadily towards reaching the sustainable development. Facing a market environment where challenges and opportunities coexist, Muyuan will always adhere to the cultural theme of "Discipline, Responsibility, Excellence and Service" and the development philosophy of "Creating value, Serving society" by providing more high-quality pork and contributing to sustainable development for society, so as to create a better life for everyone and make greater contributions to social development.

Qin Yinglin, Chairman



cninf 巨潮资讯 www.cninfo.com.cn

01 About Muyuan



cninf 巨潮资讯 www.cninfo.com.cn

Company Profile

Founded in 1992, Muyuan Foods Co., Ltd. (stock code: 002714) has its headquarters located in Nanyang, Henan Province. The Company centres itself on the "wholly self-breeding, large-scale and integrated" model and has formed a pig industrial chain that integrates feed processing, pig breeding, commercial pig farming, and pig slaughter, after 27 years of development. As of the end of 2019, the total assets of Muyuan amounted to RMB 52.887 billion, and its businesses covered 18 provinces and regions throughout the country, with 50,319 employees and 138 subsidiaries. Muyuan strengthens quality control to ensure the safety and quality of pork products, accelerates scientific and technological innovation to facilitate intelligent pig farming, implements a farming-recycling model where farm waste is recycled to promote harmonious coexistence between farming and the ecological environment, and it invests in targeted poverty alleviation by incorporating anti-poverty objectives into the Company's principal business. While achieving better performance results, Muyuan strives to promote economic, social and environmental benefits simultaneously.

Muyuan Culture

Position

Producer of high-quality pork;
Promoter of social progress.

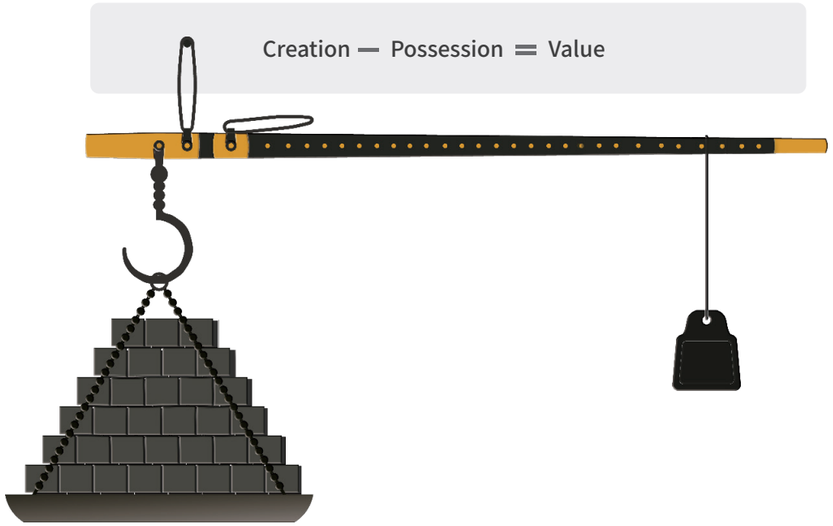
Mission

Providing the public with safe and wholesome pork products;
Promoting healthy industry development.

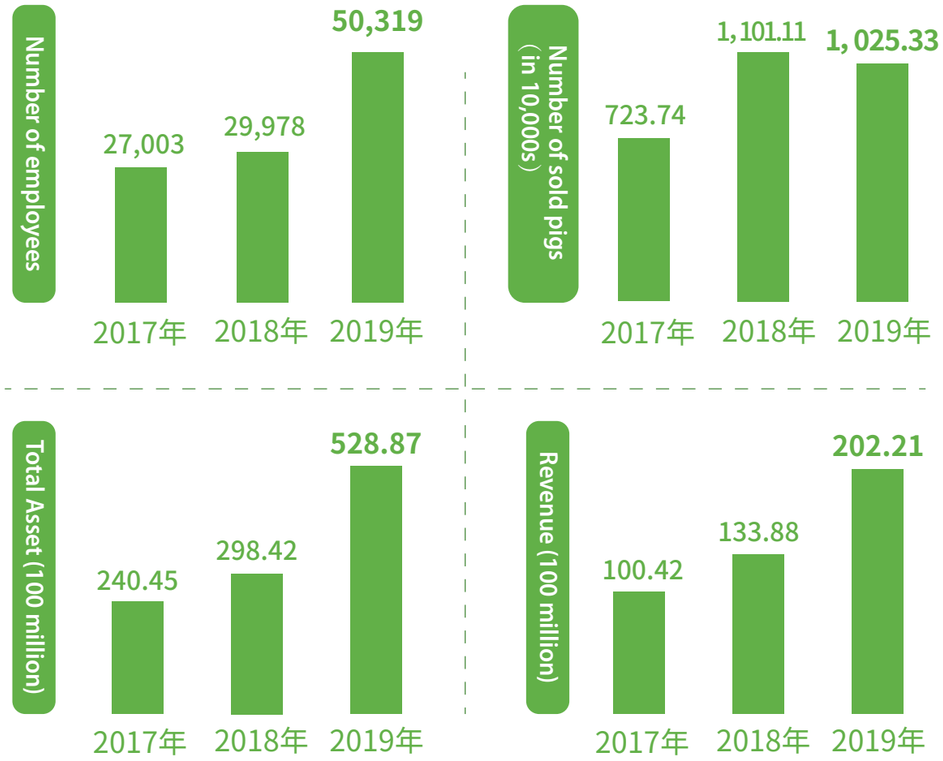
Vision

Serving people with safe pork and letting them enjoy a rich life;
Becoming a respectable company.

Muyuan value formula



Achievements in 2019



Net profit:
6.336 billion
Year-on-year growth:
1,099.91%

R&D investment amount:
112 million
Year-on-year growth:
22.26%

Annual processable feed:
7.26 million tons
Year-on-year growth:
30.80%

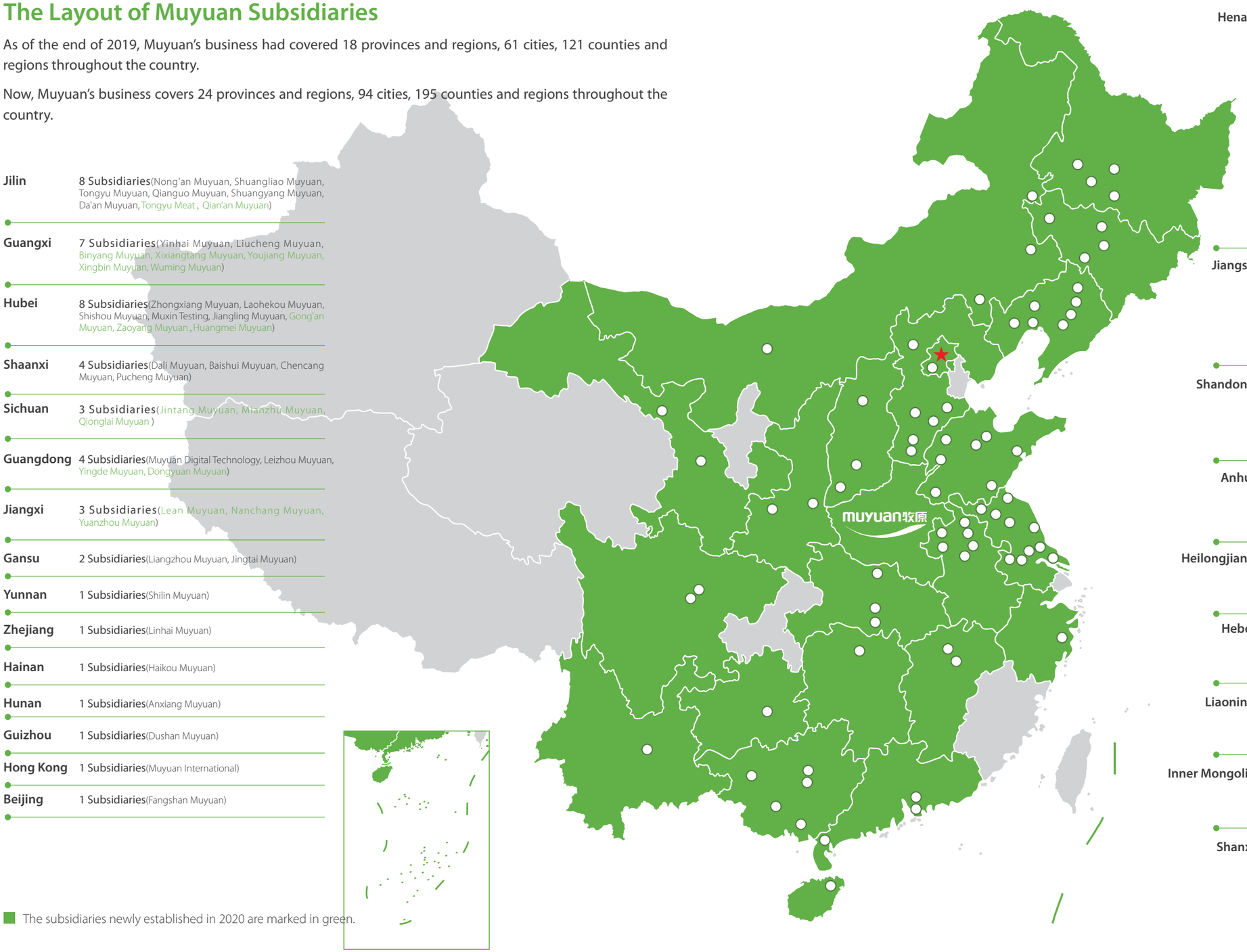
R&D personnel:
786 persons
Year-on-year growth:
17.49%

cninf 巨潮资讯 www.cninfo.com.cn

The Layout of Muyuan Subsidiaries

As of the end of 2019, Muyuan's business had covered 18 provinces and regions, 61 cities, 121 counties and regions throughout the country.

Now, Muyuan's business covers 24 provinces and regions, 94 cities, 195 counties and regions throughout the country.



Jilin 8 Subsidiaries(Nong'an Muyuan, Shuangliao Muyuan, Tongyu Muyuan, Qianguo Muyuan, Shuangyang Muyuan, Da'an Muyuan, Tongyu Meat、Qian'an Muyuan)

Guangxi 7 Subsidiaries(Yinhai Muyuan, Liucheng Muyuan, Binyang Muyuan, Xixiangtang Muyuan, Youjiang Muyuan, Xingbin Muyuan, Wuming Muyuan)

Hubei 8 Subsidiaries(Zhongxiang Muyuan, Laohekou Muyuan, Shishou Muyuan, Muxin Testing, Jiangling Muyuan, Gong'an Muyuan, Zaoyang Muyuan、Huangmei Muyuan)

Shaanxi 4 Subsidiaries(Dali Muyuan, Baishui Muyuan, Chencang Muyuan, Pucheng Muyuan)

Sichuan 3 Subsidiaries(Jintang Muyuan, Mianzhu Muyuan, Qionglai Muyuan)

Guangdong 4 Subsidiaries(Muyuan Digital Technology, Leizhou Muyuan, Yingde Muyuan, Dongyuan Muyuan)

Jiangxi 3 Subsidiaries(Lean Muyuan, Nanchang Muyuan, Yuanzhou Muyuan)

Gansu 2 Subsidiaries(Liangzhou Muyuan, Jingtai Muyuan)

Yunnan 1 Subsidiaries(Shilin Muyuan)

Zhejiang 1 Subsidiaries(Linhai Muyuan)

Hainan 1 Subsidiaries(Haikou Muyuan)

Hunan 1 Subsidiaries(Anxiang Muyuan)

Guizhou 1 Subsidiaries(Dushan Muyuan)

Hong Kong 1 Subsidiaries(Muyuan International)

Beijing 1 Subsidiaries(Fangshan Muyuan)

Henan Muyuan Headquarter,60 Subsidiaries(Neixiang Muyuan, Dengzhou Muyuan, Wolong Muyuan, Tanghe Muyuan, Fugou Muyuan, Huaxian Muyuan, Qixian Muyuan, Zhengyang Muyuan, Tongxu Muyuan, Sheqi Muyuan, Fangcheng Muyuan, Xihua Muyuan, Shangshui Muyuan, Taikang Muyuan, Xichuan Muyuan, Ningling Muyuan, Xiping Muyuan, Fanxian Muyuan, Suyang Muyuan, Shangcai Muyuan, Muyuan Grain Trade, Luyi Muyuan, Pingyu Muyuan, Xinghua Biology, Hongxin Testing, Muyuan Development, Muyuan Investment Promotion Development, Muyuan Meat , Zhengyang Meat, Xiayi Muyuan, Xiangcheng Muyuan, Anyang Muyuan, Shangshui Meat, Nanyang Muhua, Yanling Muyuan, Zhecheng Muyuan, Ruyang Muyuan, Ruzhou Muyuan, Nanzhao Muyuan, Huaxian Muhua, Fugou Mu Hua, Ningling Muhua, Muyuan Maiming, Muyuan Pig Protection, Gushi Muyuan, Qingfeng Muyuan, Puyang Muyuan, Zhenping Muyuan, Xixia Muyuan, Nanyang Musheng, Neihuang Muyuan, Zhengzhou Muyuan Digitization, Ningling Meat, Huaxian Meat, Zhengzhou Grain Trade, Shangcai Meat, Muyuan Intelligent Technology, Minquan Muyuan, Yongcheng Muyuan, Ruzhou Complex)

Jiangsu 27 Subsidiaries(Tongshan Muyuan, Guannan Muyuan, Xinyi Muyuan, Shuyang Muyuan, Pizhou Muyuan, Haian Muyuan, Haizhou Muyuan, Donghai Muyuan, Hongze Muyuan, Funing Muyuan, Lishui Muyuan, Liuhe Muyuan, Jiangning Muyuan, Zhenjiang Muyuan, Suining Muyuan, Suyu Muyuan, Qingjiangpu Muyuan, Huaiyin Muyuan, Baoying Muyuan, Gaogang Muyuan, Qixia Muyuan,Jiangyan Muyuan, Sheyang Muyuan, Lianshui Muyuan, Jinhu Muyuan, Wujiang Muyuan, Ganyu Muyuan)

Shandong 20 Subsidiaries(Caoxian Muyuan, Kenli Muyuan, Shanxian Muyuan, Dongming Muyuan, Mudan Muyuan, Xinxian Muyuan, Plain Muyuan, Huimin Muyuan, Qingyun Muyuan, Zouping Muyuan, Shandong Muhua, Jimo Muyuan, Linqing Muyuan, Chiping Muyuan, Linyi Muyuan, Gaotang Muyuan, Dong'e Muyuan, Tancheng Muyuan, Caoxian Meat,Taierzhuang Muyuan)

Anhui 17 Subsidiaries(Yingshang Muyuan, Mengcheng Muyuan, Suixi Muyuan, Fengtai Muyuan, Yingquan Muyuan, Jieshou Muyuan, Si County Muyuan, Huaiyuan Muyuan, Qiaocheng Muyuan, Huaibei Muhua, Lixin Muyuan, Guzhen Muyuan, Yingshang Meat,Woyang Muyuan, Yongqiao Muyuan, Chaohu Muyuan, Sixian Meat)

Heilongjiang 13 Subsidiaries(Longjiang Muyuan, Lanxi Muyuan, Lindian Muyuan, Mingshui Muyuan, Wangkui Muyuan, Fuyu Muyuan, Kedong Muyuan, Yi'an Muyuan, Gannan Muyuan, Mulan Muyuan, Muchen Livestock, Keshan Muyuan, Lindian Meat)

Hebei 13 Subsidiaries(Guangzong Muyuan, Guantao Muyuan, Haixing Muyuan, Xinhe Muyuan, Jizhou Muyuan, Xinji Muyuan, Ningjin Muyuan, Pingxiang Muyuan, Jingxian Muyuan, Nanpi Muyuan, Hengshui Muyuan, Guyuan Muyuan,Zaoqiang Muyuan)

Liaoning 11 Subsidiaries(Tieling Muyuan, Jianping Muyuan, Fuxin Muyuan, Yixian Muyuan, Tai'an Muyuan, Changtu Muyuan, Heishan Muyuan, Kangping Muyuan, Kaiyuan Muyuan, Tieling Meat, Taizihe Muyuan)

Inner Mongolia 10 Subsidiaries(Naiman Muyuan, Aohan Muyuan, Ongniud Muyuan, Kailu Muyuan, Ke' erqin Zuoyi Zhongqi Muyuan, Jarud Qi Muyuan, Jalaid Qi Muyuan, Naiman Meat, Urad Qianqi Muyuan, Kailu Meat)

Shanxi 12 Subsidiaries(Wenxi Muyuan, Wanrong Muyuan, Xinjiang Muyuan, Yongji Muyuan, Daixian Muyuan, Fanshi Muyuan, Xia County Muyuan, Yuanping Muyuan, Shenchi Muyuan, Hongdong Muyuan,Hejin Muyuan, Wenxi Meat)

The subsidiaries newly established in 2020 are marked in green.

cninf 巨潮资讯 www.cninfo.com.cn

Corporate Governance

Consolidating Governance

Directors: 7
Independent Directors:3

Board Meeting: 14

General Meeting of Shareholders: 7

Muyuan strictly abides by the Company law of the People's Republic of China, the Securities Law of the People's Republic of China, the Code of Corporate Governance for Listed Companies, the Rules Governing the Listing of Shares on the SME Board of the Shenzhen Stock Exchange, the Guidelines of the Shenzhen Stock Exchange for the Standard Operation of Listed Companies, together with the relevant laws, regulations and specifications released by the CSRC. Muyuan continuously refines its corporate governance structure including shareholders' general meetings, the Board of Directors (the "Board"), the Board of Supervisors, management authority and responsibility, and operational standards, with consideration to the Company's actual situation, so that the corporate governance becomes more and more effective.

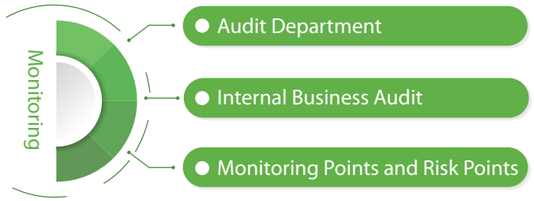
As of the end of the reporting period, the Company's Board consisted of 7 directors, of which 3 were independent directors, accounting for over one third of the total number, and one was a female director. Members of the Board have backgrounds from various professions, and from management and finance, and can give professional opinions from different perspectives. There are four special committees under the Board, namely the Audit Committee, Strategy Committee, Nomination Committee, and Remuneration and Appraisal Committee, for the comprehensive and specialised operation and management of the Company. The Board has clear division of duty and convenes meetings in accordance with the Rules and Procedures of Board Meeting. During the reporting period, the Company held 14 Board meetings, deliberating carefully on various proposals and performing duties in a diligent and responsible manner.

Muyuan strictly regulates procedures for convening, deliberating and voting at the general meetings, treats all investors fairly and honestly, and ensures that all shareholders, especially small and medium shareholders, enjoy each right on an equal footing. During the reporting period, the Company held 7 general meetings.

During the reporting period, in strict compliance with relevant laws and regulations, as well as the Articles of Association, Information Disclosure Management System, Investor Relations Management System and other relevant regulations, Muyuan fulfilled its obligations on information disclosure in a true, accurate, timely, fair and complete way, concerning the Company's operations and matters significantly affecting the Company. Muyuan discloses information in newspapers including the Securities Times, China Securities Journal, Shanghai Securities News, Securities Daily, and CNINFO (www.cninfo.com.cn), the designated website for corporate information disclosure, to ensure that all shareholders of the Company have equal access to the information.

Anti-corruption and Business Ethics

The Audit Department of Muyuan is responsible for anti-corruption and business ethics. Centring on the mission of "preventing risks, intensifying internal controls, optimising management and safeguarding operations" , it develops internal audit specifications, sets up monitoring points for key business processes, and formulates a holistic audit and monitoring system by means of special audit, operation audit, investment audit and other forms, in order to keep an close eye on any possible corruption in the course of business operations.



Incorporating internal business audit, set up monitoring points in business processes for real time monitoring

Establish and maintain the audit and monitoring system to audit and monitor key business processes

Muyuan Audit and Monitoring System

Construction of integrity and self-discipline

Muyuan takes initiative to create a clean and honest business environment to facilitate the Company's long-term growth and employees' career development. Provisions on integrity and self-discipline are included in the Code of Conduct of Muyuan Group, stating the "principle of ethics and compliance", the "principle of no appropriation of public resources", the "principle of self-discipline and prudence", the "principle of diligence and frugality" and the "principle of rigorous control and heavy punishment", in an effort to proactively create a working environment and cultural atmosphere of integrity and self-discipline.

The Audit Department, as the department in charge of anti-corruption, adopts the "zero tolerance" principle for corruption. Under the leadership of the Audit Committee, the Audit Department established the audit and monitoring system, anti-corruption system and punishment system, and improves the construction of reporting channels.

Muyuan attaches importance to integrity promotion, and conducts training covering all employees and special training for high-risk positions. During the reporting period, we conducted 5 sessions of integrity training for high-risk positions, with a total of 3,511 participants.

Educational conference on integrity and self-discipline

On 21 April 2019, Muyuan launched the education conference "Be Clean and Honest" to underline integrity and self-discipline, in which the Chief Legal Officer shared real stories to demonstrate the serious consequences of breaking laws and regulations, so as to further strengthen the integrity promotion and anti-corruption for the team.



Improving the construction of reporting channels

Muyuan promulgated the Integrity Reporting Management System and opened channels including e-mail, telephone, mailbox and official accounts to the public to actively accept various reports.

Upon receipt of a report, Muyuan will conduct an in-depth investigation and assess relevant internal controls to identify possible deficiencies. In the event of serious violations of rules and regulations or economic crimes, Muyuan will transfer the liable persons to judiciary authorities.

In addition, Muyuan strictly enforces the whistle-blower protection mechanism and keeps the whistle-blower's personal profile and the information provided confidential to resolutely prohibit retaliating against whistle-blowers.

Reporting E-mail
sjb@muyuanfoods.com

Reporting Mailbox
Muyuan Audit Department, Longsheng Industrial Park, Wolong District, Nanyang City, Henan Province, China.

Reporting Telephone
178-3775-1511

WeChat Official Account
Integrity Muyuan

cninf 巨潮资讯 www.cninfo.com.cn

02 Responsibility Management

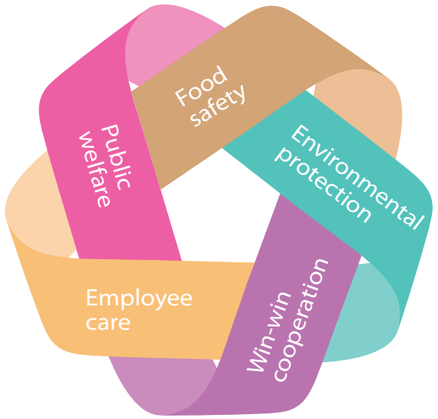
In the face of changes in the external business environment and a series of contingencies, such as ASF, COVID-19 and climate change, more and more enterprises pay attention to environmental and social risks arising in the course of their development. While stakeholders care about the financial performance of enterprises, they are now increasingly casting their eyes on companies' non-financial performance. As the leading enterprise in the breeding industry, Muyuan actively identifies its environmental and social risks and opportunities, and incorporates them into the Company's business strategies, integrating business development with CSR and promoting coordinated economic, environmental and social development.



cninf 巨潮资讯 www.cninfo.com.cn

Social Responsibility Strategy

With reference to the business characteristics, business principles and corporate mission, as well as the UN's sustainable development goals ("SDGs"), Muyuan has developed the CSR strategy featuring "5 Principles to stick to".



Food safety

Sticking to scientific and technological innovation to lead the development of the industry, continuously engage in antibiotic-free breeding, and produce safety, healthy, nutrient and delicious food for the society.



Environmental protection

Sticking to the idea of "Five Steps of Environmental Protection" to promote circular economy, carry out clean production, reduce air pollutants, and protect the ecological environment.



Win-win cooperation

Sticking to the principle of "helping each other and upholding justice and fairness" to build a sustainable industrial chain and achieve efficiency and win-win benefits.



Public welfare

Sticking to our values to build a sharing platform, make continuous progress, and stay absolutely focused for long-term growth.

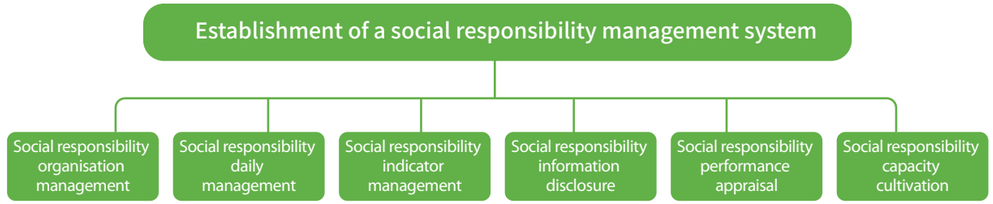


Employee care

Sticking to the idea of bringing benefits to employees, helping them develop and realise their life values.



Social Responsibility Management Framework



Decision-making level	The Board is the top decision-making body for CSR management. The Board is responsible for reviewing, adjusting, and determining the Company's major sustainable development goals and plans, formulating annual CSR plans and reviewing annual CSR reports.
Organisational level	The Social Responsibility Department is the organisational level for social responsibility work. It is responsible for coordinating and integrating the Company's internal resources to promote cross-department cooperation, clarifying social responsibility issues and work focus, as well as tracking and evaluating social responsibility performance of various departments and subsidiaries.
Executive level	Muyuan's subsidiaries and departments are responsible for execution of social responsibility work. In accordance with the requirements of social responsibility management system, they implement social responsibility daily management within their scope of authority, upgrade the Company's database of social responsibility indicators, and actively cooperate with the Social Responsibility Department for social responsibility training and capacity enhancement for employees of respective subsidiaries/departments.

Muyuan has gradually developed a social responsibility management framework consisting of six major social responsibility management systems at "decision-making, organisational and executive levels".

cninf 巨潮资讯 www.cninfo.com.cn

Materiality Assessment

In 2019, Muyuan addressed social responsibility related issues, with reference to the Company's actual situation and the materiality analysis model, communicated with various stakeholders through a wealth of channels, and identified material issues significant for both the Company and stakeholders in terms of "importance to the Company's business" and "importance to stakeholders". Such issues are explicitly disclosed in the Report and constitute the priorities of future social responsibility work.

Identifying issues

26 social responsibility issues related to Muyuan were identified with consideration to external sustainable development reporting standards, external ESG rating focuses, and the Company's business characteristics and strategic goals.

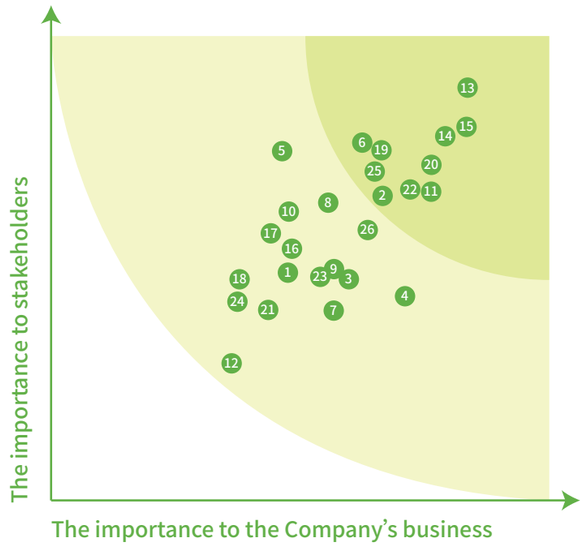
Conducting surveys

Muyuan's key stakeholders were identified and invited to evaluate materiality of the issues by virtue of surveys to obtain their opinions and suggestions.

Confirming results

2,811 valid questionnaires were collected. Muyuan summarised the results, analysed the materiality of each issue, formulated the materiality assessment matrix, and determined the material issues in conformity with the Company's actual situation based on management feedback and experts' advice.

Materiality assessment result



Area	No.	Issue	Area	No.	Issue
Economy	1	Promoting local employment	Society	14	Providing high-quality pork
	2	Driving industrial clusters		15	Preventing epidemics
	3	Corporate governance		16	Customer services and complaint handling
	4	Financial performance		17	Information security and customer privacy
Society	5	Occupational health and safety		18	Label and intellectual property right management
	6	Caring for and respecting employees		19	Compliant operation with integrity
	7	Protection of employees' rights and interests		20	Facilitating poverty alleviation
	8	Employee training and development		21	Supporting community construction
	9	Building a sustainable supply chain	Environment	22	Emission management
	10	Improving supply chain management		23	Building a circular economy
	11	Scientific and technological innovation		24	Biodiversity and land utilisation
	12	Safeguarding animal welfare		25	Reinforcing water resource management
	13	Ensuring food safety		26	Energy saving and carbon reduction

As the leader in the pig industry, Muyuan is hoped to lead the industry to further development and growth and play a more important role in poverty alleviation as well.

— Industry association

Through collaborations with Muyuan, we have realised that Muyuan has had a strong and positive brand effect of social responsibility in the areas including local employment, poverty alleviation, epidemic prevention, actual contributions to drive industrial clusters, etc. We sincerely hope that Muyuan will make persistent efforts and obtain further achievements!

— Supplier

In recent years, the Company has entered a track of rapid development, as a result, my income level has kept rising, and employee benefits have become better and better. In addition, the Company provides us with many training opportunities that help me to achieve fast improvement. I gradually find my own life value through my work in Muyuan and hope I could grow up with Company in the future to create value and serve society.

— Employee

cninf 巨潮资讯 www.cninfo.com.cn

Stakeholder Communication

Muyuan highly values communication with stakeholders. We actively communicate with various stakeholders through various communication channels to understand their expectations and demands for Muyuan and incorporate their concerns and requirements into the Company's sustainable development issues. In addition, Muyuan responds to stakeholders' expectations and concerns with practical actions to promote mutual growth.

Stakeholders	Major issues	Communication channels
Governments and regulators	Promoting local employment Driving industrial clusters、Corporate governance Safeguarding animal welfare Compliant operation with integrity Epidemic prevention	Cooperation in poverty alleviation projects Project approval and supervision Daily communication and debriefing
Shareholders and investors	High returns on investment Financial performance Scientific and technological innovation Corporate governance	Regular reporting and information disclosure General meeting、Investors surveys Performance demonstration
Consumers	Ensuring food safety Providing high-quality pork	News media Social media
Employees	Occupational health and safety Caring for and respecting employees Protecting employees' rights and interests Employee training and development Construction of corporate culture	Annual summary and commendation meeting Corporate cultural activities Regular training
Value chain partners	Refining supply chain management Scientific and technological innovation Driving industrial clusters Building a sustainable supply chain Customer services and complaint handling Information security and customer privacy	Procurement activities Supplier training Procurement and sales platform Customer call-back and satisfaction survey
Industrial associations	Building a circular economy Safeguarding animal welfare Scientific and technological innovation	Selective breeding Industry exchange Promote industry development
Community	Promoting local employment Driving industrial clusters Facilitating poverty alleviation Supporting community construction	Field study and visits、Charitable activities Community communication and exchange activities Media communication
Environment	Compliant emission Building a circular economy Biodiversity and land utilisation Water resource management Energy saving and carbon reduction	Surrounding environment monitoring Communication with Environmental protection department Farming-recycling model promotion

Topic 1 Contributing to COVID-19 Control

Contributing to the UN SDGs: 3 GOOD HEALTH AND WELL-BEING

Highlights

Muyuan Co., Ltd., together with Qin Yinglin, Chairman and Qian Ying, his wife, donated RMB **200** million for COVID-19 control and prevention in China.

- Transformed and contributed **38** negative pressure ambulances.
- Donated **4** extra-corporeal membrane oxygenation (ECMO) systems to Zhengzhou Qiboshan Hospital.
- Contributed tens of millions of face masks, millions of sets of protective suits and goggles, and hundreds tons of disinfection materials to hospitals, prevention & control headquarters and control points in **20** provinces, **68** cities, **156** counties.
- Offered special insurance for epidemic control with insurance coverage of **50** billion to over **100,000** people working on the front lines of epidemic control.
- Provided daily necessities and anti-epidemic materials for over **400,000** families through the e-commerce platform "Ju'ai Youxuan".

cninf 巨潮资讯 www.cninfo.com.cn

Showing corporate responsibility in times of crisis, uniting as one to fight against the pandemic

The COVID-19 broke out unexpectedly at the beginning of 2020. Facing such severe situation, Muyuan established the COVID-19 Prevention & Control Headquarters with Chairman Qin Yinglin as the commander in a timely manner to command the epidemic prevention and control. Over 3000 employees from the headquarters and subsidiaries response actively to the call of the Company. They voluntarily gave up their Spring Festival vacation and participated as volunteers to contribute to the battle against the pandemic, demonstrating responsibilities as part of Muyuan.



Leveraging corporate resources to guarantee supplies

In February 2020, the battle against COVID-19 was at a critical stage. The supply of prevention materials was tight whereas the demand was strong. In order to guarantee supplies, except for donating masks, protective suits and other protective materials in stock, Muyuan also actively organised the Procurement Department to open overseas procurement channels. By making full use of its global procurement network, Muyuan purchased control supplies and equipment from multiple countries, and provided to those areas with severe outbreaks free of charge. In early February, Muyuan purchased masks, protective suits and other scarce prevention materials through various channels, and quickly sent them to Hubei Province, Henan Province, Guangdong Province and other areas with severe epidemic situation, which eased the "urgent need" of front-line staff.



After learning that Zhengzhou Qiboshan Hospital, a newly established hospital designated for COVID-19 treatment in Henan, lacked medical equipment, Muyuan immediately arranged the Procurement Department to purchase and donate 4 extra-corporeal membrane oxygenation (ECMO) systems through various channels.

Giving full play to our advantages in independent R&D to empower COVID-19 control with technology

In order to safely isolate patients in transit, Muyuan set up an emergency working group on January 31 to quickly initiate R&D and production. By utilising the air filtration and negative pressure ventilation technology developed for ASF control, the working group quickly transformed negative pressure ambulances, one of the key demand protection materials which can minimize the probability of cross infection with the personnel outside the medical cabin. As of the release of the report, 38 negative pressure ambulances had been transformed and contributed to hospitals in Hubei Province and Henan Province respectively, which played an active role in COVID-19 control.



In the light of the needs in epidemic control, Muyuan utilised and improved the infrared temperature measurement system independently developed in the production process. The temperature could be measured when a person entered the measuring chamber, without any close contact with the staff. In the case of an abnormal temperature, the system would automatically alarm and display personnel identification information, which improves the testing efficiency while reducing the risk of exposure to infection.

Changing the recruitment model to actively promote employment

To ease the unemployment after the epidemic, Muyuan actively carried out "COVID-19 Control and Employment Promotion" through online presentations, video interviews, etc. After rapid changes in the recruitment model, Muyuan provided 100,000 jobs nationwide, which helped with the employment of migrant workers returning home and new graduates. As at the release of the report, Muyuan had organised a total of 1,130 special recruitment programmes, getting more than 30,000 new recruits.

In May 2020, a large-scale online recruitment campaign for poverty alleviation, the "National Employment Action in Spring" , was officially launched. Muyuan advertised more than 10,000 jobs to candidates on the live broadcast, attracting hundreds of thousands of jobseekers from all over the country.







Ensuring employees' safety and health on their way back to work

Under the premise of doing its best to control the COVID-19, Muyuan strictly implemented the government' s policy requirements, and considered its own conditions for comprehensive and conscientious resumption of work and production, so as to guarantee pig supply. In order to reduce the employees' infection risk on their way back to the workplace, Muyuan organised "chartered planes" and "chartered trains" for them. Through efficient communication with local governments and airlines, the Company organised chartered plane from Nanyang to Changchun to help employees in the Northeast return to work. Meanwhile, in collaboration with Nanyangdong Railway Station, the Company hired a chartered high-speed train from Nanyangdong to Fuyangxi to transport employees who needed go to Kaifeng, Shangqiu, Anhui Fuyang, etc., as well as construction workers working on the farm to return to work.







> "Today, we took a chartered plane arranged by the Company to our workplace from 2,000 kilometres away, which has solved our problem on returning to work. Sincerely, we thank the Company for its considerate planning and arrangement, and I feel so proud of being a member of a company with strong employee care and powerful strength. After returning to work, I will race against the time to make up for the lost time, work hard to raise pigs and manufacture more wholesome pork, so as to ensure people can have wholesome pork during the COVID-19 outbreak."
>
> — Presentation by return-to-work employee representative

cninf 巨潮资讯 www.cninfo.com.cn

Some entities beyond the Scope of the Report have also made contributions to Muyuan's fight against COVID-19, specifically involving Muyuan Industrial Group Co., Ltd., Muyuan e-commerce poverty alleviation platform "Ju’ ai Youxuan" and the major participation of its chairman Qin Yinglin and his wife Qian Ying. The above specific practices are explained as follows.

Providing donations actively

Muyuan Co., Ltd., together with its Chairman Qin Yinglin and Qian Ying, his wife, co-donated 200 million yuan, including 100 million yuan donated by Qin Yinglin and his wife Qian Ying to the COVID-19 prevention and control work. The donation has assisted more than 3000 medical institutions and prevention checkpoints in 68 cities and 156 counties in 20 provinces.

Contributing special insurance with insurance coverage of 50 billion for over 100,000 heroes fighting against the epidemic

In order to relieve some worries of front-line workers, Muyuan offered “special insurance for epidemic control” with insurance coverage of 50 billion, covering over 100,000 medical workers, police officers, civil servants and Party members, and volunteers in Nanyang and 1,281 members of Henan Medical Team supporting Hubei Province and Nanyang City, Henan Province.



Facilitating channels for living supplies to safeguard normal supply

Muyuan e-commerce poverty alleviation platform "Ju’ ai Youxuan" is a non-profit and public welfare e-commerce platform under Muyuan Industrial Group Co., Ltd.. It aims to fully benefit users and is required by Muyuan Group that the annual net profit rate not exceed 1%. The platform helps poor households increase their income and then get rid of poverty through consumption poverty alleviation; on the other hand, it creates a remarkable e-commerce platform so that people can enjoy an abundant life..



For the sake of cutting off the transmission to the utmost and guaranteeing the supply of living supplies, Muyuan guaranteed the daily needs of more than 400,000 families and provided free delivery for their daily necessities and prevention materials such as fruits and vegetables, meat and medicine through “Neixiang County Supply Zone” and “Nanyang Urban Supply Zone” on the e-commerce platform “Ju’ ai Youxuan” . At the same time, the platform provided 10 masks for free to each family in Nanyang City and Neixiang County, and a total of over 300,000 masks were provided.

Muyuan actively responded to the call of the state and urgently guaranteed the supply across the border. From February 11 to February 20, Xinghua Equipment, a subsidiary of Muyan, took only 9 days to complete the commissioning of the first production line, which can produce 20,000 masks every day. On March 15, the second and third production lines were successively debugged, and the daily output of masks reached 150,000, which played an important role in ensuring the supply of prevention materials.

Love knows no borders : organising protective supplies to rush to the rescue of countries overseas

With the spread of COVID-19 all over the globe, Muyuan Industrial Group Co., Ltd., proactively purchased preventive supplies to assist countries overseas seriously impacted by the epidemic and support the work of COVID-19 control conducted by local hospitals and the overseas Chinese. At present, Muyuan’ s overseas contribution destinations have covered Asia, Europe, America and Africa. By providing masks, protective suits and other protective supplies for organisations in nearly 30 countries such as Russia, Pakistan, Italy, Germany, UK, South Africa, Muyuan has effectively supported the COVID-19 control work in a number of countries overseas.



Topic 2 Further Promotion of Targeted Poverty Alleviation

Contributing to the UN SDGs:



Highlights

精准扶贫

- As of the end of 2019, Muyuan had invested **22.82** billion in **71** national and provincial poorer counties, realising the employment of more than **30,000** people in those counties.
- As at the end of the reporting period, the “5+” asset-based income model had been extended to **49** counties (regions) in **12** provinces, including Lindian in Heilongjiang Province and Yingshang in Anhui Province, with targeted efforts to achieve poverty alleviation of **349,932** people from **139,827** households.
- As at the end of the reporting period, our subsidiaries had held **137** job fairs, especially for employment transfer, and recruited **1,024** people from registered poor households.
- The e-commerce platform “Ju’ ai Youxuan” , which is owned by the parent company Muyuan Group, was used to conduct poverty alleviation through consumption. More than **160** special agricultural and sideline products from **27** poor counties in **13** provinces (regions) were put for sale online, with a transaction of over **40** million. From these efforts, **6,916** registered poor households benefited, and **14,095** people increased their incomes.
- Muyuan supported college students in **14** consecutive years for education poverty alleviation. A total of **17,245** students from **83** counties (regions) in **13** provinces benefited from this.
- Muyuan has designed a poverty alleviation management system, which can register information, update status, quantify poverty alleviation measures and effectiveness of **140,000** households and more than **300,000** poverty-stricken people who have established files and registered cards. It has realized the information-based management of poverty alleviation work.

cninf 巨潮资讯 www.cninfo.com.cn

2019 was, in all respects, a crucial year for building a prosperous society, and marked the decisive stage of the fight against poverty. Conscientiously implementing the important strategic concepts of the Party Central Committee on poverty alleviation, Muyuan actively integrated the enterprise's development strategy into the national strategy, and continued to make use of its advantage as a leading agricultural industrialisation enterprise. Moreover, through cooperation with multiple parties to expand the "5+" poverty alleviation model, and to advance the model of "3+N", Muyuan also consistently explored a long-term mechanism for stabilising poverty alleviation, and strived to improve the self-restoration capacity in poverty-stricken areas, so as to improve the effectiveness of, and consolidate the achievements of, poverty alleviation, thus assisting the battle against poverty.



On 1 October 2019, Mr. Qin Yinglin, Chairman of Muyuan, along with representatives from all over China who have made outstanding contributions to poverty alleviation, participated in the parade on the 70th Anniversary of the Founding of The People's Republic of China. They were on the parade float in the formation named "Poverty Alleviation", inspected by the motherland and the people.

Poverty Alleviation of "5+" Asset-based Income

Since 2016, Muyuan has cooperated with the Neixiang CPC Committee, county government, the China Development Bank Henan Branch and other financial institutions to implement the poverty alleviation model of "5+" asset-based income, namely "government + financial institutions + leading enterprises + cooperatives + poor households" . We embedded the development of poor households in the industrial chain of Muyuan, which have effectively solved the poor households' problems of lack of funds, technology, managerial expertise and projects. As a result, we have realised a leap from 0 to 1, a wealth base from 1 to N and the ability of poor households to eliminate poverty. On the basis of the "5 +" poverty alleviation model, Muyuan innovated and designed a new mode of "County-Township-Village" three-level cooperative operation. The new mode gradually develops the cooperative into a new rural business entity with assets, income and profit and realizes the increase of collective income. At present, there are 15 township level Ju' ai cooperatives and 279 village level cooperatives in Neixiang County. Muyuan has signed grain order contracts with 120 village level cooperatives, labor contracts with 4 Township level cooperatives, and organized more than 3,000 people to participate in Muyuan's national project construction.

The three-level cooperatives operation is the transition stage from poverty alleviation to rural revitalization. The mode upgrading and business innovation made by Muyuan in the field of poverty alleviation further consolidated the poverty alleviation effect, improved the quality of poverty alleviation, laid the industrial foundation for rural revitalization, and enhanced the appeal, cohesion and combat effectiveness of grass-roots Party organizations.

Advantages of the poverty alleviation model of 5+ asset-based income

Good industry	Good enterprise	Good assets	Good mechanism	Good protection
The agricultural industry is worth trillions. With great room for development, the industry is transforming into a large-scale, standardised, and intelligent industry.	A leading listed agribusiness with high profitability, growing operating results, large market value and good credit.	Environmentally friendly, energy-saving, smart, efficient and advanced facilities, with useful life up to 30 years, help achieve sustained and stable operations.	Stable income. Cooperatives profit from asset leasing with relatively low market risk; poor households receive quarterly dividends, with a stable source of income.	Freedom to dispose of assets as seen fit. Assets are negotiable with high value in use and are principal guaranteed.

In 2019, the poverty alleviation model of "5+" asset-based income was implemented in 10 counties (regions) in 4 provinces, including Xinhe County, Hebei Province and Jingtai County, Gansu Province, etc. It has increasingly demonstrated strong ability to drive out poverty and has been a significant demonstration of the effect of poverty alleviation. As at 31 December 2019, the poverty alleviation model of "5+" asset-based income had been promoted in 49 counties (regions) in 12 provinces, including Lindian County, Heilongjiang Province and Yingshang County, Anhui Province, etc. Through this effort, we provided targeted poverty alleviation assistance to 349,932 people from 139,827 registered poor households and brought an accumulated 540 million to them. As at the release of the report, benefiting from the poverty alleviation model of "5+" asset-based income, 38 counties in 10 provinces had won the battle against poverty. And this model had become one of the most extensive poverty alleviation models in the country, covering the largest number of poor households and involving the largest number of financial institutions as well.

Alleviating poverty through "5+" asset-based income



Wang Tinghui, living in Huanglian Village, Yuguan Town, Neixiang County, Henan Province, came from an registered poor household. Due to mental disability, his wife was on long-term medication. Wang Tinghui also suffered from lumbar disc herniation and was unable to do heavy work. And his daughter just entered the fourth grade of primary school. It was difficult to lift such a household out of poverty due to heavy family burden.

Taking into consideration the reality of the situation, the county government relocated Wang Tinghui's family by moving them into a new bungalow from the original old truss house. Besides this, Muyuan offered him a public welfare post at the 17th branch, with a monthly salary of 2,000, i.e., an annual income of up to 24,000. And meanwhile, as a member of the Ju'ai Cooperative, he also benefited from the "5+" poverty alleviation model, getting an annual rent share of 3,200. In addition, he was able to receive 3,000 annually based on the photovoltaic poverty alleviation project. Owing to these measures, Wang Tinghui could earn more than 30,000 a year, and was successfully lifted out of poverty.
Wang Tinghui was diligent and hardworking. In his spare time, he also bought fruit trees with the dividends paid to him and planted them over several mu of his own land (15 mu =1 acre). He said, "as my family is getting better off, I'm in an increasingly better mood."

cninf 巨潮资讯 www.cninfo.com.cn

Creating a "Poverty Reduction and Sustainable Development Demonstration Zone"

The poverty alleviation model of "5+" asset-based income obtained the attention and recognition of the United Nations Development Programme. In 2017, Muyuan, together with the Neixiang County government, conducted in-depth exchanges with the United Nations Development Programme to discuss the possibility of, and develop a working plan for, establishing a "Poverty Reduction and Sustainable Development Demonstration Zone" in Neixiang, which could promote the development of Neixiang County in an all-round way on the basis of international resources, and expand the global impact of the "5+" poverty alleviation model through asset-based income. On 13 January 2019, the first county-level poverty reduction project of the United Nations Development Programme - the three-year "Neixiang County Poverty Reduction and Sustainable Development Demonstration Project" was officially launched. And at the same time, by setting up the Women's Development Fund, small loans were provided to impoverished women who had demonstrated entrepreneurial willingness, to support them to carry out income-generating activities, improve the quality of their family life, and raise women's awareness of independence.



Mr. Qin Yinglin, Chairman of Muyuan, and Mr. Yang Shuguang, the deputy secretary of the Neixiang CPC Committee and county chief won the National Poverty Alleviation Award

On 9 October 2017, Mr. Qin Yinglin, Chairman of Muyuan, won the Contribution Award of the National Poverty Alleviation Award





On 17 October 2019, Mr. Yang Shuguang, deputy secretary of the Neixiang CPC Committee and county chief, and the chief designer of the "5+" model, won the "Advanced Personal Innovation Award of the 2019 National Poverty Alleviation Award".

Combination of Various Assistance Models

While continuing to promote the "5+" poverty alleviation model, Muyuan also actively pushed on the "3+N" poverty alleviation model based on the guidance of Mr. Liu Yongfu, director of the State Council Leading Group Office of Poverty Alleviation and Development. The "3" refers to asset-based income, transfer of employment (to areas with higher job availability) and labour outsourcing. "N" refers to various assistance models including poverty alleviation through consumption, finance, order-sourcing and photovoltaic projects.

As at 31 December 2019, Muyuan has invested 22.82 billion in poverty alleviation industries in the relief programmes of 71 national and provincial poverty-stricken counties, realising the employment of more than 30,000 people in poor counties. The subsidiaries of Muyuan had held 137 job fairs, especially the transfer of employment, and offered jobs to 1,024 people from registered poor households. Meanwhile, some labour services were contracted to Poverty Relief Cooperative by Muyuan according to operational needs, including sporadic projects, returning liquid fertilizer to field, security tasks, cleaning and greening, etc. The Poverty Relief Cooperative operated according to Muyuan's needs to gain income and arrange jobs for qualified registered poor households, which helped them to gain income and enhanced their own ability for overcoming poverty and increasing income.

Poverty alleviation through consumption



Based on "Ju'ai Youxuan" ★, an e-commerce platform owned by Muyuan Group and adopting the model of "e-commerce platform + poor households + high-quality products", Muyuan expanded the online sales channels of agricultural products from the poverty-stricken areas to improve the income of poor households.

As of the end of the reporting period, more than 160 special agricultural and sideline products from 27 poor counties in 13 provinces (regions) had been put on sale online, with a transaction total of over 40 million. From these efforts, 6,916 registered poor households benefited, and 14,095 people increased their incomes.

Poverty alleviation through finance



Muyuan invested 5 billion to set up the Zhongzheng Jiaotong Poverty Alleviation Industry Fund, targeting 832 national key counties for poverty alleviation and contiguous counties which share special difficulties. On this basis, Muyuan focused on investing in enterprises in poverty-stricken areas and those able to provide industrial coordination to poor counties, so as to improve the self-restoration capacity in poverty-stricken areas, and further motivate local economic development.

Poverty alleviation through orders



Muyuan has driven cooperative enterprises to jointly carry out poverty alleviation work by means of targeted procurement and increasing orders. Muyuan cooperated with Henan Tianman Clothing Co., Ltd. and adopted the business model of "company + poverty alleviation workshop + poor households" based on Muyuan's orders. It invests in the establishment of branch factories and processing workshops in Neixiang County, driving more than 400 left behind women to work, including 28 registered poor women, to effectively help poor families increase their incomes.

As of the end of the reporting period, Muyuan had built 20 poverty alleviation workshops in the poverty-stricken villages of Neixiang County through this model, attracting 522 poor persons for employment.

Poverty alleviation through photovoltaic projects



In cooperation with the local government, Muyuan handed over the roofs and vacant space on the farms to the local government for the purpose of developing photovoltaic poverty alleviation projects in Neixiang of Henan, Tongshan of Jiangsu, and Laohekou of Hubei, etc. Distributed to each village according to the equity proportion, the project income was used to increase the collective income of the village and the income of low-income farmers. As of the end of the reporting period, the projects' total scale had reached 31.04 MW, covering about 9,700 poor households, with an average annual net income of about 3,000 per household.

★ "Ju'ai Youxuan" platform is a platform of Muyuan Industrial Group Co., Ltd., which is beyond the Scope of the Report.

cninf 巨潮资讯 www.cninfo.com.cn

Provide posts to ignite hope

Neixiang County was a national-level poverty county. Under challenging natural conditions, farmers had little hope of increasing income or poverty alleviation. Dong Jingyan, living in Dongtang Village, Tuandong Town, Neixiang County, came from a registered poor household. Due to a surgery on his leg, Dong Jingyan was unable to do heavy work. Life was so difficult, with little chance of escaping poverty.



In December 2016, Muyuan provided poor households in Neixiang County with posts including pig breeder, community cleaner, logistics handyman, etc., and set up public welfare posts for incapable labour forces. Besides, for those suffering special conditions, family dormitories were specially arranged near the farm. "Now I am a cleaner on the farm, and my work also includes watering and weeding. I am on a monthly pay of about 3,000. In addition to dividends from the Ju' ai Cooperative, I can earn nearly 40,000 a year!" Dong Jingyan said feelingly, he and his wife had already "made the farm their home" . Now, Dong Jingyan has picked up confidence in life, "I am so eager to earn more to make life more comfortable and afford better education for my children. I would like to express my thanks to the government and Muyuan for giving me this opportunity!"

As a large-scale agricultural enterprise born and raised in "agriculture, rural areas and farmers", Muyuan has close ties with farmers. Since the CPC Central Committee put forward its strategy of poverty alleviation, by making full use of our resource advantages and industry boosting capabilities as a leading enterprise and listed company, Muyuan has actively explored and implemented practical poverty alleviation methods, and committed itself to making its dominant industry into the nation's largest poverty alleviation industry. Therefore, more and more poor households can achieve a steady increase in income and poverty alleviation is gathering pace. As of 31 May 2020, Muyuan had invested 30.097 billion in 79 national-level and provincial-level poor counties, among which, 47 national-level poor counties had been lifted out of poverty, and 25 out of 32 provincial ones had won the battle against poverty.

During the crucial period of poverty alleviation, Muyuan will continue to serve the overall national poverty alleviation work, respond to the call for targeted poverty alleviation, and give full play to its industry-driven advantages. Furthermore, it will help more poor people out of poverty by actively carrying out industrial poverty alleviation, employment poverty alleviation, etc. In doing so, it can assist to win the battle against poverty and make greater contributions to building a prosperous society in all respects and realising rural revitalisation.

Some entities beyond the Scope of the Report have also made significant achievements in poverty alleviation, specifically involving Muyuan Industrial Group Co., Ltd. and Henan Ju'ai Digital Technology Co., Ltd., and are explained as follows.

"Ju' ai Digital Technology" won the title of Advanced Private Enterprise in the "Business to Help Village" (B2V) poverty alleviation campaign



In addition to devoting itself to poverty alleviation, Muyuan also actively led other subsidiaries of Muyuan Group to jointly carry out poverty alleviation activities. Henan Ju' ai Digital Technology Co., Ltd., a wholly-owned subsidiary of Muyuan Group, set up a special product column on the e-commerce platform "Ju' ai Youxuan" for poor areas, to make a contribution to the consumption poverty alleviation efforts.

In October 2019, it was awarded the honorary title of Advanced Private Enterprise in the "Business to Help Village" (B2V) poverty alleviation campaign for its remarkable achievements in stimulating poor households to increase income.

Muyuan was shortlisted in the first selection of Excellent Cases of Targeted Poverty Alleviation by Chinese Enterprises



On 31 March 2019, the press conference of the "Excellent Cases of Targeted Poverty Alleviation by Chinese Enterprises (2018)" , jointly sponsored by the State Council Leading Group office of Poverty Alleviation and Development and the China Social Responsibility 100 Forum, was held in Beijing. Muyuan's poverty alleviation effort - "Making Our Main Business Poverty-Alleviation and Incorporating Poor Households to Lift them out of Poverty" was selected as part of the Top 50 Model Cases of Targeted Poverty Alleviation by Chinese Enterprises (2018).

Topic 3 Industrial Upgrading of ASF Prevention

Contributing to the UN SDGs:

Highlights

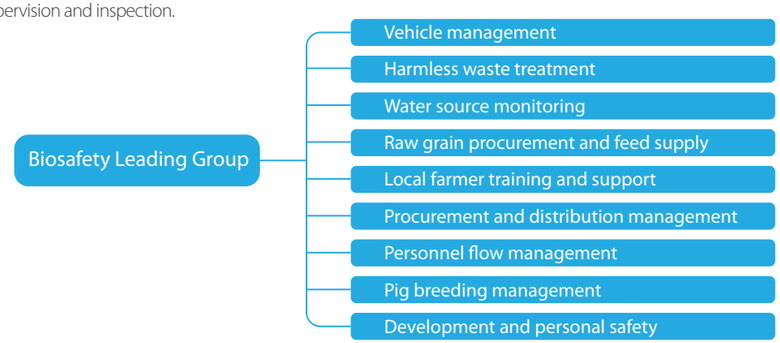
- In 2019, the number of market hogs reached **10,253,300** which provided **656,000** tons of safe and wholesome pork to the market, accounting for **1.55%** of the national supply and meeting **16.93** million people's demands for pork.
- In order to effectively prevent ASF, Muyuan quickly responded and established **60** laboratories all over the country to provide testing services to other small and medium-sized farmers and individual farmers in the industry.
- In February 2019 (outbreak period of ASF), to enhance the whole industry's confidence in fighting ASF, Muyuan held an international exchange meeting on ASF and invited domestic and foreign experts to share experience. This meeting improved the industry's overall epidemic prevention level and promoted industry progress.
- Mr. Qin Yinglin, deputy to the National People's Congress and Chairman of Muyuan, put forward the Accelerating the Rapid Transformation and Upgrading of the Breeding Industry to Achieve Sustainable Development Proposal at the Second Session of the 13th National People's Congress of the People's Republic of China. The proposal was then specially replied to by the Ministry of Agriculture and Rural Affairs.

cninf 巨潮资讯 www.cninfo.com.cn

Since the first outbreak in China in August 2018, the situation of ASF control and prevention is still complex and severe. Muyuan actively responded to the national guidelines and executed relevant national and local government requirements. Muyuan continually carried out control training sessions through cooperating with the local governments in the places where subsidiaries were located, and jointly developed and implemented the ASF control program to prevent ASF in a strict manner.

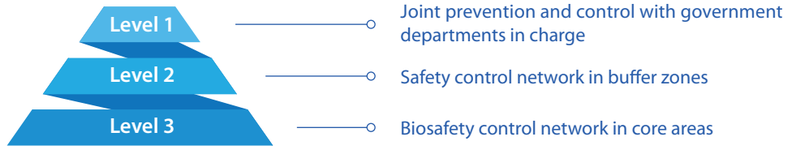
Improving the Control System

Facing the severe situation of ASF, Muyuan promptly established a biosafety leading group with a senior executive as the leader. By establishing an epidemic control system and standard procedures, Muyuan guided biosafety trainings and carried out relevant supervision and inspection.



Following a three-level AFS control and prevention system, Muyuan established a comprehensive biosafety management system, formulated standard operating procedures such as the Hygiene Management Standards on the Farm, Guidance on Disinfection Measures for Water Sources on the Farm, Production Staff Code of Conduct for Biosafety, etc. Muyuan carried out various biosafety trainings to enhance safety awareness in an all-round way. At the same time, Muyuan introduced the biosafety assessment system to quantify each farm's risks and produce visualised results, greatly improving the management efficiency.

Three-level ASF Control and Prevention System



Entrance management elements

- Boar/Weaned pig
- Semen
- Pig shed
- Water source
- Feed
- Air
- Personnel
- Materials
- Incoming vehicles
- Load-out site for sale
- Road surface
- Epidemic disease
- Pig manure and urine
- Pest infestation
- Deliberate poisoning

Farm management elements

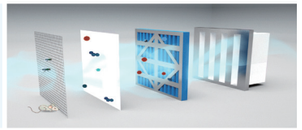
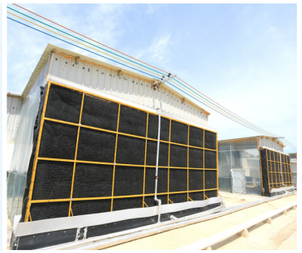
- Renovation and upgrading of hardware facilities
- Upgrading of personnel, vehicles, materials and tools management
- Monitoring and testing
- Minimum cell management

Exit management elements

- Sales of market hogs
- Transfer of boars and weaned pigs
- Transportation of dead / sick pigs
- Transportation of medical wastes
- Transportation of domestic and production wastes

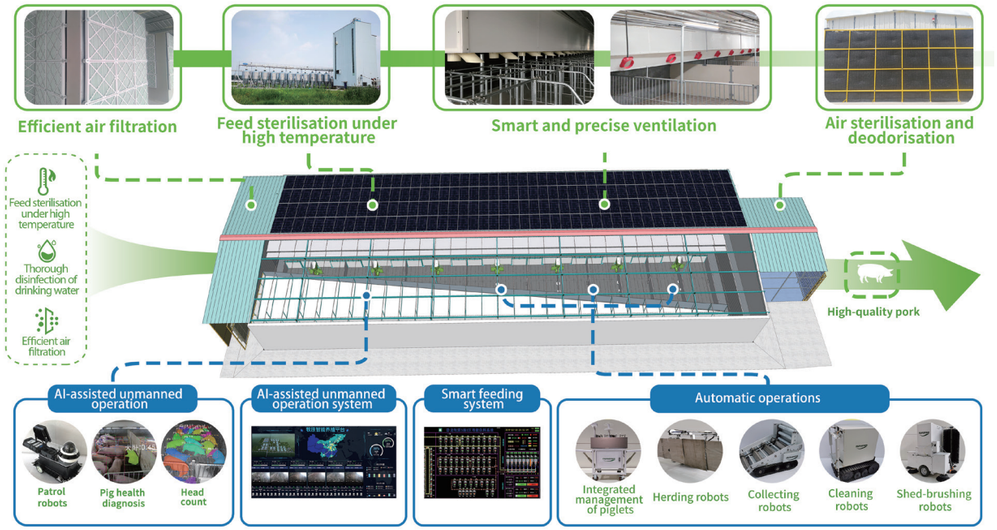
Comprehensive Innovation and Upgrading

In the face of AFS, Muyuan immediately tried multiple plans to improve the biosafety system: implemented three-level (farms - surrounding areas - fields) prevention and inspection; implemented five-level (off-site - site - partition - row building - unit – fence) entrance disinfection; employed a six-hour system through anomaly detection-sampling- submission-detection-decision; adopted seven-level (highway/national highway/provincial highway - county road/Township Road/Village Road - entrance road - field road – pig-driving road - common road - unit corridor) road disinfection and sterilization; exercise eight supporting facilities (feed factory - disinfection station - isolation point - general warehouse - laboratory - isolation house - harmless centre- inspection centre) supervision; carry out management at 15 cycles risk prevention and control elements (Boar/Weaned pig- semen-pig sheds/water source-feed-air/personnel-materials-vehicles/road-load-out site- disease/pig manure- pest infestation- deliberate poisoning), comprehensively upgrade hardware to realize air filtration, precise ventilation, air sterilization, pipe chain feeding, water ultrafiltration, centralized decontamination, and robot inspection and finally created three-prevention (anti-disease, anti-odour, and anti-ASF) pig farms. Meanwhile, Muyuan comprehensively adopted the closed air filter vehicles as pig transport vehicles, which make no pollution along the way. Through upgrading the equipment such as "three-prevention pig farms" and "air filtration vehicles", Muyuan has realized a comprehensive control over the feeding, living and transportation of pigs, and comprehensively reduced the risk of ASF infection.

Key points of improvement	Specific measures	Example
Feed sterilisation under high temperature, Intelligent schedule and transportation	Feed production is guided by intelligent platform and feed processing center. Feed will be sterilised at at 85 ° C during production; the intelligent scheduling system will then mix the produced feed in the pipeline and airtight deliver them to the demand unit. Through the intelligent feeding system, the whole process is unmanned.	
Efficient fresh air filtration	Effectively block ASF, blue-ear disease and other viruses in the air outside of the hog house by 4 levels of air filtration.	
Thorough disinfection of drinking water	Ensure healthy drinking water and reduce the risk of exposure to diseases by thorough disinfection of water sources.	
Smart and precise ventilation	Enable separated ventilation for every single sow and every single shed for hogs and avoid air crossing by smart and precise control.	
Application of smart equipment, unmanned operation	Realise smart breeding and unmanned operation based on smart platform development, smart equipment application and AI application, to reduce human-pig contact and the risk of disease transmission.	
Air sterilisation and deodorisation	Automatically adjust the volume of water and deodorant concentration according to external climatic conditions, such as temperature, humidity, air pressure and other environmental parameters, to ensure no impact of external factors on the deodorisation effect. Effects of the deodorisation system: 1. Dusting efficiency: 70% (comprehensive efficiency of PM2.5 and PM10) 2. Sterilisation efficiency: 93% 3. Deodorisation effect: Level 0 (no odour) within 1 meter of the exhaust end	

cninf 巨潮资讯 www.cninfo.com.cn

Three-prevention Pig Farm Schematic Diagram



Promoting ASF Control in The Whole Industry

In addition to its own control work, Muyuan also actively carried out various activities, including discussing ASF control measures with industry peers, sharing the unique experience of Muyuan, helping small and medium-sized farmers, so as to promote the development of the entire industry.

Focus on NPC & CPPCC

To facilitate the transformation and upgrading of the breeding industry, and accelerate the development of modern animal husbandry, Mr. Qin Yinglin, deputy to the National People's Congress and Chairman of Muyuan, put forward the Accelerating the Rapid Transformation and Upgrading of the Breeding Industry Proposal to Achieve Sustainable Development at the Second Session of the 13th National People's Congress of the People's Republic of China. To counter the ASF outbreak, in order to promote laboratory testing and related technology R&D,


中华人民共和国农业农村部
Ministry of Agriculture and Rural Affairs of the People's Republic of China
首页 机构 新闻 公开 政务服务 专题 互动 数据 业务管理

对十三届全国人大二次会议第6391号、第6489号、第6495号、第6496号、第6497号、第6499号、第7086号、第7090号、第7092号建议的答复

and to standardise laboratory biosafety management, Qin Yinglin put forward a suggestion on the opening of national laboratories for the overall ASF control project, which gave strong support to the ASF control-related decision-making.

Industry Exchange

International Exchange, Experience Sharing



On 22 February 2019, the International Symposium on African Swine Fever Prevention, hosted by the Henan Swine Industry Association and Muyuan, was held in Zhengzhou, Henan. At the conference, a number of experts from the United States and Denmark shared key experiences on ASF prevention. Mr. Qin Yinglin, Chairman of Muyuan, delivered a speech entitled "New practices for ASF prevention during feed, processing, and transportation" and shared Muyuan's experience in ASF prevention at the conference.



The 6th Global Pig Forum and the 16th (2019) China Swine Industry Development Conference



The 8th Leman China Swine Conference



The 17th (2019) China Animal Husbandry Expo and 2019 China International Animal Husbandry Expo

cninf 巨潮资讯 www.cninfo.com.cn

Supporting Small and Medium-Sized Farmers

Since November 2018, all subsidiaries of Muyuan have been actively assisting the local government with ASF prevention and control work. Through the self-developed "Warning and control big data platform of animal husbandry", Muyuan, allied with small and medium-sized farmers, carried out all elements management of regional disease information to jointly supervise, forecast and control ASF. In addition, all subsidiaries supported small and medium-sized farmers in fighting ASF through investigation on pig farmers around the area and promotion on ASF prevention knowledge.

During the outbreak of ASF, Hubei was under enormous pressure in coping with severe situation of ASF prevention and control. The local subsidiary of Muyuan actively cooperated with the government in fighting ASF. It introduced special assistants and donated sterilisation vehicles and various control supplies worth tens of thousands of yuan. In addition, the subsidiary conducted training sessions and distributed leaflets on ASF prevention to enhance the ASF prevention awareness and ability of small and medium-size farmers. It also provided ASF testing for Muyuan's farms, other small and medium-size farmers and individual farmers, so as to support the whole industry's ASF testing and prevention.





ASF has had significant impacts on the pig breeding industry and put forward higher requirements for biosecurity protection systems on pig farms. Muyuan is equipped with a comprehensive epidemic prevention system and strong professional teams and has taken a series of preventive measures including hardware upgrading and management enhancement. In the future, we will further improve our ability to safeguard the quality of hogs, enhance the R&D of anti-epidemic and nutritional technologies, and comprehensively promote epidemic prevention, so as to provide consumers with high-quality and wholesome pork.

Topic 4 Technology Innovation, Leading the Upgrade

Contributing to the UN SDGs:

Highlights

- A total of **786** R&D talents and R&D investment of **112** million.
- A total of **156** utility model patents, **1** design patent and **25** invention patents.
- Won **2** Henan Provincial Science and Technology Progress Awards and **11** Henan Provincial Technology Achievements, participated in **3** National Key Science and Technology Programs and undertook **1** Henan Provincial Key Science and Technology Program.
- Initiated **167** technological R&D applications programs in 2019, including **22** artificial intelligence and **60** robotics R&D applications.

cninf 巨潮资讯 www.cninfo.com.cn

Adhering to "high-tech production of wholesome pork" , Muyuan upgraded its pig breeding mode from 1.0 to 3.0 (defined in boxes below) after years of exploration and marched into an era of smart pig farming. By developing smart equipment such as smart-feeding machinery, smart environmental control machinery and pig-breeding robots, we provide a highly clean-living environment for pigs to safeguard their health and achieve safe production.

Pig breeding era 1.0

Free-range farmers raise pigs manually.



Pig breeding era 2.0

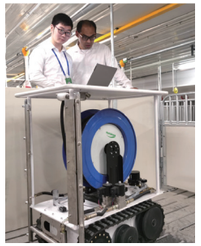
Automatic and mechanised pig breeding increases productivity through standardised industrial management.



Pig breeding era 3.0

Artificially intelligent pig breeding uses smart robots to carry out pig farming, reduces human-pig contact, conducts online monitoring, and establishes optimisation bases through centralised computer systems, so as to achieve smart pig farming.





Smart Platform

Integrating new technologies such as big data analysis, forecasting, and Internet of Things (IoT) within the industry, Muyuan has built a smart digital platform covering industry chains such as feed management, epidemic prevention and control, smart breeding, environmental protection management, food safety traceability, etc., ensuring the online management and real-time communication of all business modules for safe and efficient operation of the production system.



Smart breeding platform

Muyuan has established a smart breeding platform to collect real-time information like the temperature and humidity of hog houses and equipment operating conditions, using by data collection control equipment. We have formed a smart production system with self-organised and self-adapted functions by using information processing and artificial intelligence technologies. Based on different ages and various conditions of pig herds, the system automatically finds the most suitable growth control plan for pigs, to achieve refined breeding management and smart decision-making.



R&D Team

R&D Investment:
112 million

Patents: **182**

Muyuan has recruited 786 R&D talents from leading colleges and scientific research institutions at home and abroad including George Washington University, Carnegie Mellon University, Chinese University of Hong Kong, Tsinghua University, etc. The R&D direction covers specialised areas like husbandry, veterinary, breeding, nutrition, smart IT, energy engineering, environics and materialogy. In addition, Muyuan has actively cooperated with external companies to develop smart technology and create a smart breeding ecology.

In 2019, Muyuan invested a total of 112 million for R&D. As of the end of the reporting period, various hog houses and relevant equipment developed and designed by Muyuan had been granted 182 utility model patents, design patents and invention patents.

Unmanned Breeding Industry

Smart Production System

Feed production

The smart feed production system realises unmanned operation for the whole process through smart equipment and technologies such as automatic raw grain sampling, unattended weighing, hydraulic rear dump auto-unloading vehicle, etc., reducing personnel contact with materials to ensure biosecurity and work safety.

The system also makes it possible for feed processing to be matched with real-time feed demands, and avoids undercapacity or overcapacity by real-time data update, data processing and data analysis.



Feed management

Through smart airtight pipes, feed is delivered to corresponding pig sheds without contact with air, which guarantees biosecurity. The smart feeding equipment in the breeding unit can build a fine feeding model based on the growth curve of pigs, and thus achieves precise individual feeding with support of smart feeders. Meanwhile, the system automatically collects information such as feed intake and water consumption to monitor and make warnings on pigs' health, and thus achieves smart feeding and data management.



Smart breeding robots

Muyuan independently developed and applied a series of smart breeding robots, which are used for feeding, patrol, pig herding, pig collecting, disinfection and cleaning, to realise unmanned patrol, remote monitoring, smart identification, self-diagnosis, smart control and unattended operation.



Rail patrol machine



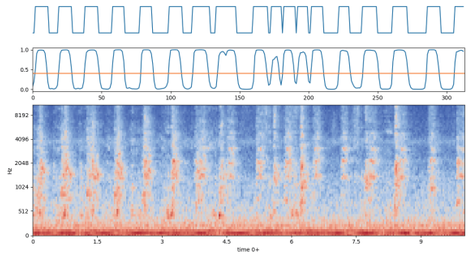
Automatic pig collecting machine

cninf 巨潮资讯 www.cninfo.com.cn

Smart Pig Health Monitoring Based on Artificial Intelligence

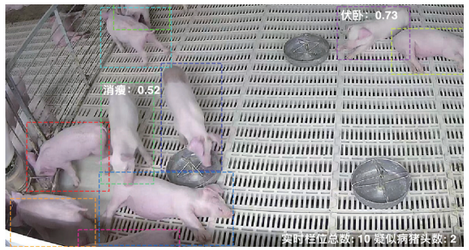
Smart cough monitoring

Through continuously collecting, filtering and calibrating sound data in hog houses by the sound collecting devices, coughing pigs can be identified. According to the cough voiceprint of different diseases, the system can issue health warnings, disease identification and treatment evaluation.



Visible image recognition

Through capturing footages of pigs and calibrating these onto different behaviours of pigs, by building algorithm models via artificial intelligence, different positions and characteristics of pigs are monitored and identified. Sick, weak and abnormal pigs can be automatically identified accordingly. The pigs' health conditions could be determined.



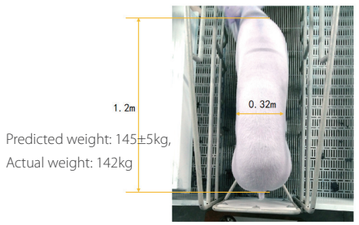
Infrared temperature measurement

Infrared temperature measurement device on the patrol machine is used to take temperature samples at critical parts of pigs at different times; statistical analysis and data comparison are then performed to detect pigs with fever based on observed abnormal data, thus realizing self-diagnosis.



Image weight estimation

Based on image processing algorithms, the camera on the patrol machine and the handheld camera can accurately measure the weight of pig herds and of the individual, which contributes a lot to health monitoring and individual management of pigs.



Predicted weight: 145±5kg,
Actual weight: 142kg

Identification of Sick & weak pigs and sales headcount recognition

By using technologies including voice recognition, visual recognition, in-depth learning, knowledge graph, etc., signal and image processing, smart identification, monitoring and measurement of various indicators can be realized.



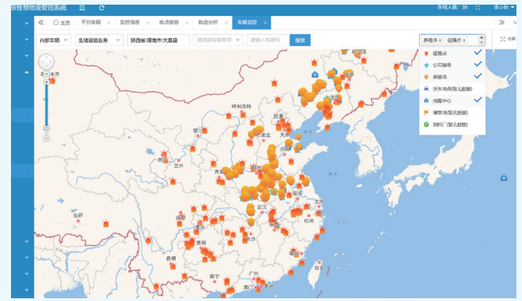
The breeding industry in China is currently in a period of ongoing transformation and upgrading towards modern animal husbandry, which needs to be achieved by technology. Muyuan actively initiates technological innovation, managing to constantly improve breeding efficiency and reduce breeding costs with the assistance of smart devices, IoT, artificial intelligence and big data analysis. Through the application of smart machines, smart breeding platforms and three – prevention pig farms, we also create a clean breeding environment to safeguard pigs' health and produce wholesome pork.

At present, Muyuan is building a big data service platform based on data collection from all breeding processes to provide extensive application scenarios and massive industry data, and to establish a breeding mode covering the whole industrial chain ecology. In the future, Muyuan will drive the upgrading of the pig industrial chain through technological innovation and gradually guide the breeding industry towards the new era of intelligence.

Muyuan Logistics Co., Ltd., an entity beyond the Scope of the Report, has also actively carried out scientific and technological innovation and built an intelligent logistics platform to improve the efficiency and security of logistics transportation.

Building a logistics management platform

While actively pursuing scientific and technological innovation, Muyuan Logistics Co., Ltd takes initiative to promote joint development of all links in the industrial chain and lead the industry to gradually enter a new era of intelligence.



The platform integrates online and offline resources, arranges vehicles scheduling in a fast and accurate manner by exploiting technologies such as information technology, intelligence, GPS positioning, and provides specialised, visualised, standardised and customised vehicles and goods matching services to address issues in traditional logistics. It provides a stable number of trips and income for individual drivers and ensures logistics security for owners.



cninf 巨潮资讯 www.cninfo.com.cn

03 Food Safety First

Providing High Quality Pork

Produce wholesome food for society, improve life quality for the community and help people to enjoy an abundant life.
Rely on our own strength to create value without chasing undeserved profits.

— Muyuan Basic Law

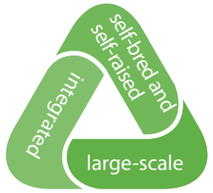


Highlights

- Intelligent industrial chain, cloud-based business operation, unmanned pig farming, and transparent traceability system across the whole business chain which can protect every link from the "farm source to the dining table" and make the food safety guarantee visible.
- Passing the Food Safety Management System **FSSC22000** certification recognised by GFSI (Global Food Safety Initiative) and passing the **GLOBAL GAP** standard certification as the first pig breeding company in China to do so.

cninf 巨潮资讯 www.cninfo.com.cn

Guaranteeing Safety and Quality



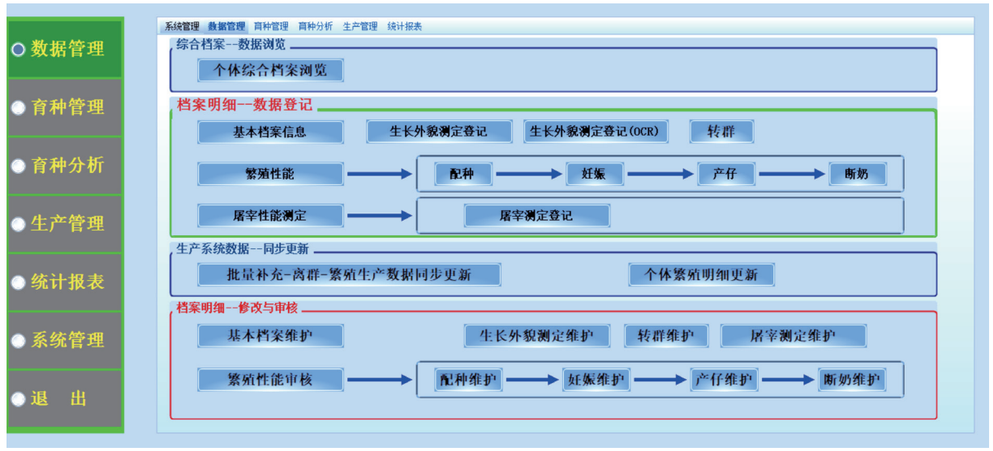
Muyuan sticks to the whole industrial chain management model for pig breeding, which is "self-raised, large-scale and integrated" and gradually carries out its industries layout in slaughterhouses and logistics. Muyuan promotes smart agriculture: through the process management such as intelligent breeding, intelligent environmental control, precision feeding, behavior analysis, intelligent veterinarian, intelligent food safety management system, Muyuan implements digital management throughout the product life cycle, realizes the digital and intelligent food safety management across the whole industrial chain, and provides more safe and reliable products for consumers.

Selecting Excellent Breeding Pigs

Driven by the pork demands of end consumers, Muyuan takes food safety, pork quality, lean meat rate and fertility as main indicators and focuses on selecting and breeding excellent pigs. Muyuan relies on scientific breeding techniques to improve genetic performance, increase the breeding efficiency, reduce feeding costs, and improve the quality and taste of pork, which provides high-quality source of pigs for the Company, effectively supports the stable production and supply of pigs, and facilitates the production capacity recovery of pig breeding industry.

Building a scientific research platform

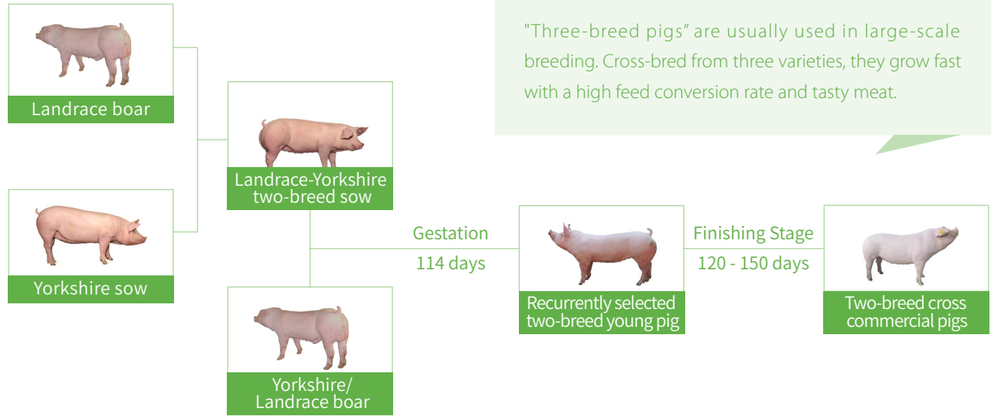
Muyuan, together with the world's top universities and research institutes, has built a first-class scientific and technological innovation platform and conducts researches on key technologies for breeding pigs, such as smart testing, genetic big data evaluation and molecular identification of genetic resources. In addition, Muyuan established a professional data management center to realize centralized information management system, and developed a breeding system with independent intellectual property rights, through which performance data of breeding pigs and their descendants are collected and breeding value is calculated using Best Linear Unbiased Prediction Model (BLUP) and GBLUP software.



Establishing breeding systems

Muyuan has formed a large resource library of lean breeding pigs, covering the world's best varieties and strains, which laid a solid genetic foundation for the breeding system. After years of selection, we have gained our own high-yielding variety. It was selected through strict genetic evaluation and a combination of performance testing and marker-assisted selection. Excellent genes of breeding pigs are quickly spread by artificial insemination. The quality of breeding pigs is continuously improved. A breeding system for lean pigs with constant improvement is established.

Muyuan has continuously explored and innovated and built a complete breeding system of "great-grandfather to grandfather to parent to commercial pig", forming a Recurrent binary breeding system. The system produces pigs that can both provide meat and used for breeding. Faced with the extreme lack of sows caused by ASF, the system provides the market with high-quality breeding pigs, facilitates the production capacity recovery of pig breeding industry and effectively supports the stable production and supply of pigs.



"Three-breed pigs" are usually used in large-scale breeding. Cross-bred from three varieties, they grow fast with a high feed conversion rate and tasty meat.

Promoting genetic exchange

As one of the first national pig core breeding farms, Muyuan already owns two national core pig breeding farms. Meanwhile, Muyuan organizes and participates in the genetic exchange activities among excellent breeding pig enterprises at home and abroad, continuously carries out genetic improvement of various economic traits, and promotes the development and progress of the industry.

In 2019, Muyuan participated in the "National Joint Research Program for the Fine Breeding of Livestock". We focused on the selection of high-quality lean pigs, the construction of a genome selection reference group, the exploration of major genes for pigs' essential traits, thus to provide technical support for molecular breeding of pigs.

Protecting the Nanyang black pig

Nanyang black pig breeding has a long history. It has stable genetic performance and shows distinct advantages when hybridising with foreign pigs. For the purpose of promoting conservation and utilisation of local pig resources, Muyuan cooperated with Neixiang Shunfa Nanyang Black Pig Protection Technology Co., Ltd. to conduct a general survey on Nanyang black pigs, formulate a breed conservation and selection plan, set up a breed conservation group, specify methods for breed conservation and selection, in order to preserve the fine genes by generational selection.

cninf 巨潮资讯 www.cninfo.com.cn

Food Safety Management System

Muyuan strictly implements the international standards and the requirements of Muyuan Basic Law, continuously improves the food quality standards, and effectively monitors the whole process from source to production to sales, so as to ensure the safety of pork products across the whole production chain from farm to dining table.

Raw materials: input management system

- Establish a tripartite management system consisting of source quality control, technical testing, and procurement to fully secure input quality through upstream supplier information management (realized by e-procurement system), input quality inspection and acceptance, storage management, etc.;
- Formulate a Food Safety Management Manual and inspect raw materials in accordance with standards which are stricter than the national quality and transportation requirements;
- In 2019, 158 input suppliers were assessed, 2,301 batches of input quality were inspected on a sampling basis, the qualification rate of incoming materials was 93.65%, unqualified products were returned and replaced in a timely way; 2,350 batches of input were accepted for storage, and the qualification rate for usage was 100%.



Feed: feed processing management system

- Set up smart feed factories with smart production processes;
- Strictly implement the requirements of Feed Quality and Safety Management Specification and other regulations and standards, control each risk point of the business chain of "source procurement - storage - processing - transportation - farms", so as to ensure that feed production is knowable, controllable and traceable; among all raw materials, corn is sourced from Northeast China and the biological safety and quality can be guaranteed;
- Adopted FSSC22000 management system and passed third-party certification;
- In 2019, no risk event occurred at the feed factory and the qualification rate for sampling inspection on raw materials was 100%.

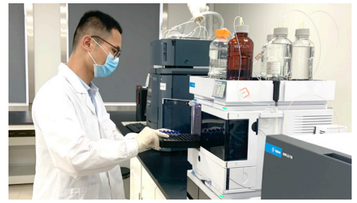


Breeding: pig breeding security system



- Ensure a safe and clean environment for pig sheds by efficient fresh air filtration, smart and precise ventilation and other smart and automatic facilities;
- Effectively improve pigs' health with the sound biosafety prevention and control system established by professional veterinarians and production teams;
- Provide overall guarantee for the safety of pig feeding and drinking water through intelligent scheduling of feeding and thorough disinfection of drinking water, airtight transportation of feed and water to corresponding pig house, and intelligent feeding system where the whole feeding process is automatically recorded and unmanned;
- Muyuan realised standardised management of the whole pig breeding process based on the food safety management plan approved by GFSI. Passed the China Good Agricultural Practices (China GAP) certification in January 2019 and passed the Global Good Agricultural Practices (Global GAP) certification in February 2020.

Testing: testing and monitoring system



- Set up the subsidiary Henan Hongxin Testing Technology Co., Ltd. (Hongxin Testing). Conduct testing and verifying work including veterinary drug residues, nutrition testing, environment monitoring and epidemic diagnosis, etc. in veterinary drugs, water source, feed and pig breeding. This is in accordance with the annual supervision focus of animal products set by the Ministry of Agriculture and Rural Affairs. We have adopted the combination mode of self-testing and third-party testing for food safety.

Sales: product quality certification system



- Guided by the needs of clients and consumers, continuously follow and analyse the trend of meat quality demands in the market. Communicate with the breeding department and the production department in a timely manner, and stick to improving the process specifications and pig quality;
- Established strict standards including the Muyuan Commercial Pigs Standard and the Muyuan Pork Products Standard. Comprehensively regulate products in aspects of sensory indicators and production performance. Conduct strict approval and testing of pig quality before sales, and only the pigs which meet the standard are available for sale;
- Operated unmanned weighing equipment during the sales link to reduce the trauma and stress of pigs and improve the quality of pigs;
- In 2019, pass rate for sampling inspection on pig products was 100%.

Harmless: harmless management system



- Strictly follow the harmless treatment standards, apply advanced technology and equipment, and carry out visual supervision on the transportation and treatment process;
- In 2019, no dead sick pigs flowed out.

cninf 巨潮资讯 www.cninfo.com.cn

Epidemic prevention and control

Muyuan has set the Veterinary Department and the Nutrition Department as the main responsible departments for pig health and nutrition management. We established a complete epidemic prevention management system, and continuously carry out research on pathogenic viruses and bacteria in pigs. We promote steady progress in disease prevention and control and have reached the leading level in the field in China.

Adhering to the concept of "breeding is above prevention, prevention is above treatment and the prevention and control are integrated" , Muyuan formulates immunisation management procedures, and disinfection and anti-epidemic policies for pigs. We takes anti-epidemic measures such as a multi-level quarantine system for pig farms and microenvironment control in each house, and has established a corresponding anti-epidemic warning system.

For the farms' layout, Muyuan plans them as "large areas, small units" to prevent cross-infection and invasion of external pathogens. During the breeding process, Muyuan takes biosecurity measures including "segregated early weaning" , "segregated parity production" and "one-to-one transfer" to ensure that the anti-epidemic system functions safely and effectively. The Company further improves pigs' health by smart feeding and fine management of pigs' nutrition.

In 2019, Muyuan made achievements in disease research and prevention as follows:

- Blue-ear disease: the detection rate of antigens in various herds dropped significantly, among which the detection rate of antigens in weaned herds decreased by 9% compared to 2018; the average weekly miscarriage rate of sows decreased by 0.4% over 2018;
- Zero detection of foot-and-mouth disease and Seneca virus;
- Zero incidence of Porcine Epidemic Diarrhea (PED);
- E. coli control: occurrences were greatly reduced, and the incidence was controllable without edema;
- H. parasuis and streptococcus control: occurrences were greatly reduced.

Engaging in antibiotic-free breeding

Muyuan formulated management systems, processes, tools, etc. for procurement, acceptance, storage and utilisation of veterinary drugs and vaccines, and formed mid- and long-term plans to gradually and orderly reduce and ban antibiotics, to establish and improve an antibiotic-free breeding management system.



Three-level standards for Muyuan' s "antibiotic-free breeding"

Avoid use of "prescription antibiotics" from breed phase to nursery phase.

Provide high-quality pigs and cut down use of antibiotics.

Strictly comply with national withdrawal period standards; avoid use of "growth-promoting antibiotics" in the course of breeding.

[Feed]: proceed with research on feed nutrition and develop plans for feeding different pigs to guarantee their nutrition and health, actively evaluate and screen antibiotic alternative products and drugs. Muyuan has gradually withdrawn the use of pharmaceutical additives in feed since September 2019.

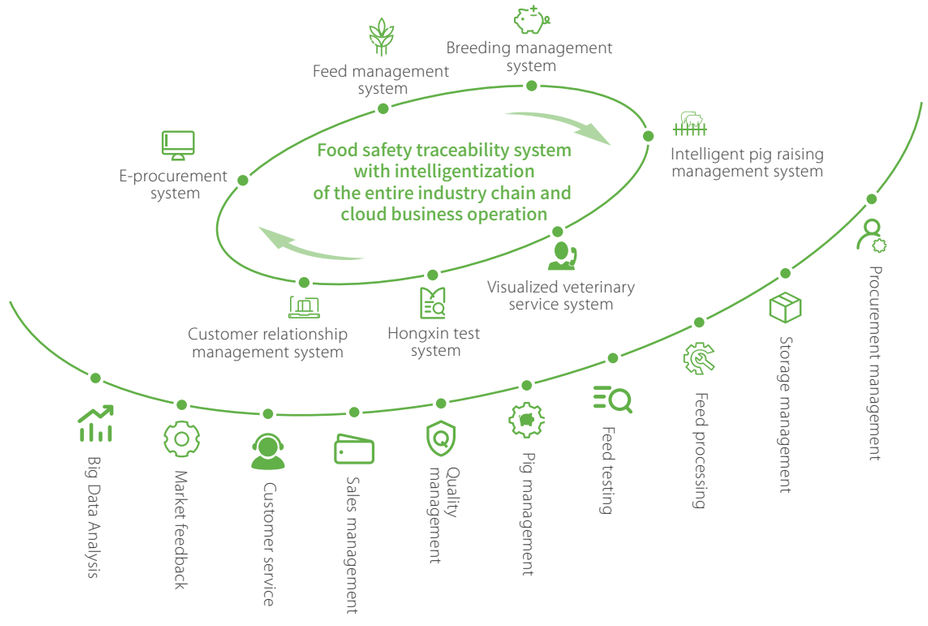
[Breeding]: monitor, prevent and control pigs' diseases accurately in a timely manner; set up a database of drug sensitivity for precisely choosing and using veterinary drugs; focus on the development of a water dosing system to reduce drug consumption of herds.

[Product]: continuously monitor drug residue in pork, tissue, feed, water, soil, etc.

[Empower personnel]: provide professional training for relevant personnel, including regular training and assessment for disease diagnosis, accurate dosing, statistical analysis of drug sensitivity database, smart pig shed application and production management, to enrich staff's knowledge and improve their operational skills.

Food Safety Management across the Whole Industry Chain

Muyuan is committed to improving the food safety manatement "from farm to dining table" across the whole industry chain. Through industrial Internet, intelligent feeding, intelligent equipment, Internet of Things platform, AI technology and other application technologies, a transparent traceability system of food safety and product quality is formed.



With the expansion of Muyuan' s business, Muyuan is actively planning a traceability system of terminal products, where one product is stamped with one peculiar OR code, by scanning which consumers can get the complete product information, such as its origin, the production process, etc. and enhance their trust in food safety.

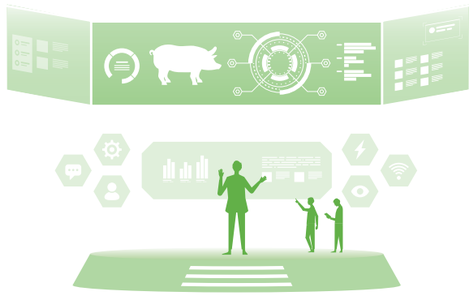
In 2019, Muyuan developed a large full screen for quality control integrated with the traceable system, showing a clear vision of business processes. All modules can detect and send real-time warnings, so that the Company can identify and address issues in a timely way.



cninf 巨潮资讯 www.cninfo.com.cn

Committing to Animal Welfare

Muyuan established animal welfare standards covering all subsidiaries. Combing the production practice, we explore ways to treat farmed animals more reasonably and humanely, to ensure animals grow in a healthy and comfortable way by using scientific methods and easing their pain in injury, disease and death.



Muyuan animal welfare policy

Stick to five basic principles of animal welfare, treat pigs with care and kindness, provide a safe, healthy and comfortable environment for pigs' growth.

Muyuan winning "Good Pig Production Award 2019"

On 27 June 2019, Compassion in World Farming (CIWF) held the Global Good Farm Animal Welfare Awards Ceremony in Brussels, Belgium. Muyuan was awarded the "Good Pig Production Award 2019" , which was approved and granted by the International Cooperation Committee of Animal Welfare (ICCAW) and Compassion in World Farming (CIWF).



Muyuan advocates scientific and precise pig breeding and examines pigs' needs for each breeding phase, dedicated to promoting pigs' welfare.



Physical Welfare

Adequate nutrition - The nutritionist team formulates different nutrition formulas according to the different growth cycle of pigs, so as to ensure that pigs have adequate nutrition intake during the whole growth process.

No hunger and no thirst - Smart feeding realizes individual precise feeding: it automatically feeds pigs when they need to eat, so as to ensure that pigs do not rush for food and can enjoy fresh and healthy feed and drinking water at any time.

Health welfare

Sound Prevention- Muyuan establishes a comprehensive biological prevention and control system, formulates standardized operation procedures such as vehicle transportation, water source monitoring, raw grain procurement, production management, etc., and comprehensively enhances the staff awareness through various training to ensure pig health in an all-round way.

Safe Food- Muyuan transfers safe and high-quality corn as feed raw materials from Northeast China, strictly controls the quality from the source; Muyuan carries out sterilization of feed through feed high-temperature sterilization station and pipe chain system to reduce feed contact with human and air; the whole process control ensures the food safety for pigs and the healthy growth of pigs.

Health Monitoring- Muyuan developed and applied the orbit inspection robots to continuously collect the sound, image and infrared temperature measurement information of pigs; based on artificial intelligence, Muyuan can quickly and effectively judge the health of pigs and monitor a variety of growth indicators to achieve 24-hour health management of pigs.

Pigs tagging - Muyuan uses ear tag, printed tag, etc. for permanent identification, and uses materials without toxic and hazardous substance for temporary identification.

Environmental Welfare:

Clean environment- A clean growth environment is provided for pigs through intelligent feeding, pig robots and other intelligent equipment; the burden of the staff is thus reduced and the work efficiency is improved.

Fresh air filtration- The pig sheds adopt 4-stage air filtration system, which can not only effectively isolate mosquitoes, flies and dust, but also intercept 99.3% ofAFS, blue ear disease and other viruses. The air filtration grade of pig sheds is 16, which is close to ICU air standard.

Precise ventilation- The independent ventilation system can realize precise ventilation of pig sheds, avoid cross ventilation, and provide high-quality air for pigs.

Pigs transferring- Drinking water available for pigs any time before transferring; less than 8 hours of transport time; less than 3 pigs/m^2 of density, less than 15 pigs for every partition; transport vehicles without sharp edges or bumps that might hurt pigs, and adequate height allowing pigs to stand normally; avoiding transporting pigs in extreme weather to reduce their stress reaction caused by excessively high or low temperature.

Behavioural welfare:

Pigs loading and unloading: Muyuan uses proper equipment to handle pigs horizontally, carries out the process with minimal external force and reduces mixed loading; injured and sick ones shall not be loaded and transported.

Sows farrowing- The awaiting sows are transferred to the delivery room 3 to 5 days prior to the due date; the farrowing bed is clean and comfortable with its length no less than 2.2m, and the distance between the top rail and the sows' back is no less than 0.15m when they are standing by which they could sit up and lie down easily; the free-birth system with unrestricted facilities is adopted; piglet is provided with supplementary heat to ensure appropriate living conditions.

Mental Welfare:

Good mental health- Muyuan independently developed and applied a series of intelligent breeding robots to realize "unmanned" and reduce the contact between personnel and pigs, so as to reduce the stress response of pigs.

cninf 巨潮资讯 www.cninfo.com.cn

04 Circular Economy

Realising Sustainable Development

Practice environmentally-friendly and animal-friendly business operations, promote circular economy, carry out clean production, reduce air pollutants, constantly improve food quality standards and actively construct industrial ecology to facilitate sustainable development.

— Muyuan Basic Law

Highlights

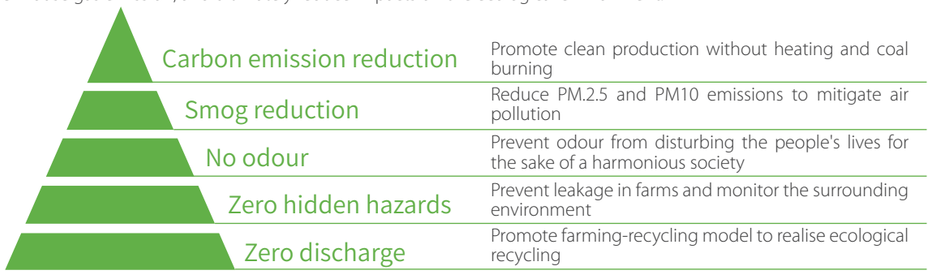
- Greenhouse gas emission: **0.55** kg CO_2e/kg live-weight
- Freshwater consumption: **1.6** m^3/pig
- **Zero** external discharge of waste water and waste



cninf 巨潮资讯 www.cninfo.com.cn

Innovative Environmental Management Concept

Attaching great importance to environmental protection, Muyuan has put forward the development principle of "no cost transfer, no responsibility shirking and no hidden hazards" and the concept of "environmental protection first" , and has built a "Five Steps of Environmental Protection" model, aiming to control energy consumption from the source, reduce pollutants and greenhouse gas emission, and ultimately reduce impacts on the ecological environment.



"Five Steps of Environmental Protection" Model

Refining the Management Mechanism

Muyuan continuously improves the environmental management mechanism, with the Board as the highest regulatory body for environmental protection. The Environment Monitoring Department set up by the Company is responsible for analysing and making judgements on national environmental protection policy trends, building and implementing the environmental monitoring system, and shall report to the Board on a regular basis.

Muyuan has established a sound environment management of organisational structure throughout its headquarters, regions, subsidiaries and farms.

- The logistics support department is responsible for developing standards and policies for environmental protection, guiding and managing environmental protection-related practices in various regions, and conducting research on technological innovations to make further progress across the environmental criteria;
- The regional logistics support departments monitor and manage the environmental protection activities of the subsidiaries at the request of the state and surrounding communities;
- The environmental management team of each subsidiary is responsible for real practices together with the operation team of each farm based on the environmental protection requirements of the Company.



Muyuan Environmental Management Organisational Structure

In 2019, in accordance with the relevant laws and regulations of environmental protection and to meet the development needs of the Company, Muyuan optimised a series of regulatory policies such as the Policy for Environmental Protection Red and Yellow Licenses and the Environmental Protection Operation and Management Policy. We continued to strengthen environmental management in accordance with the requirements of ISO14001 and obtained external certification.

Building an Information-based Platform

In order to promote the informatisation-based management of environmental protection, Muyuan built a big data platform and an information-based management system to monitor and manage environmental data and share the environmental information internally.



Muyuan Environmental Protection Big Data Platform

By applying the IoT technology, Muyuan has established a big data platform to monitor all environmental data. The platform enables the delicate management of environmental protection through real-time recording and continuous monitoring of environmental indicators (including water consumption, sewage amount, sewage flowed into farmlands, gas consumption, power consumption, etc.) of different farms and business units, risk prevention and control, and efficiency assessment. Under a new operation model for environmental protection that integrates a variety of techniques such as data monitoring, automatic upload, remote operation and unattended operation, Muyuan continues to promote intelligent environmental management. We also expand the environmental monitoring scope with unmanned aerial vehicles and high definition cameras installed throughout the farms to improve regulatory effectiveness.



Creating Environmental Protection Culture

In order to create a corporate culture of environmental protection involving all staff, Muyuan organises various trainings on environmental technologies and environmental management policies to strengthen environmental protection awareness and skills among all staff.

Environmental protection trainings and activities

In 2019, Muyuan organised trainings on a monthly basis for environmental protection personnel, with a total of over 200 trainings completed. In addition, in order to enhance new employees' awareness and concepts of environmental protection, the Logistics Support Department conducted special environmental protection trainings for new employees in 2019, where information on environmental protection laws and regulations, environmental protection concepts of Muyuan, environmental protection processes and technology, etc. were introduced.





On 5 June 2019, Muyuan carried out the "6.5 World Environment Day Promotion Campaign" to enhance environmental perception and awareness of all employees and call on them to protect the environment.

In 2019, in response to the Implementation Plan for the Household Waste Classification Management Policy of Henan Province and to gradually promote the classification of household waste, Muyuan launched the campaign themed "Waste Classification for Environmental Protection" to convey the meaning and methods of waste classification to employees.



cninf 巨潮资讯 www.cninfo.com.cn

Building Circular Economy

Sticking to the concept of green development and comprehensively acting upon the basic national policy of resources conservation and environmental protection, Muyuan follows the principle of "reduced production, harmless treatment, resource utilization and ecological recycling", It also continuously develops innovative environmental protection technologies, optimises environmental protection standards, and strengthens discharge management. Based on years of breeding experience, Muyuan has developed the circular economic model of "breeding - biogas manure - green agriculture", contributing to rural revitalisation and the building of beautiful China.

To realize scientific utilization of resources, Muyuan set up a team of special agronomists to carry out research and development. Up to now, the team has 142 agronomists, including 37 postgraduates and 73 undergraduates, with an annual R & D budget of more than 13 million yuan. With an investment of more than 26 million yuan, Muyuan has set up an environmental protection R&D laboratory to support the research and development of resource utilization technology, implement soil testing and formula fertilization, and realize the technical standard of resource utilization of "one case, one district, one discussion".

Reducing Resource Consumption

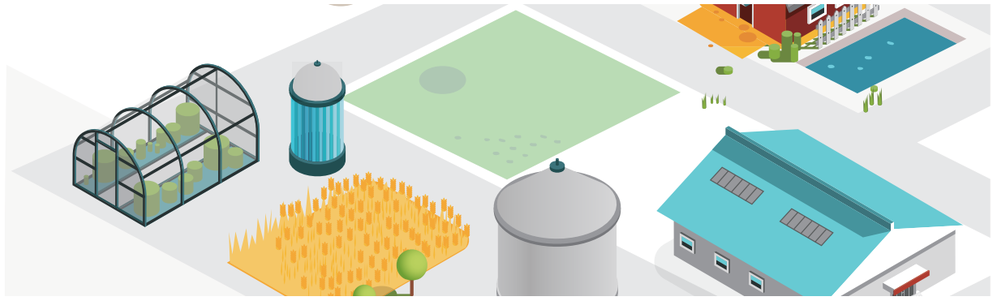
Muyuan has set up a clean production management system for monitoring and managing its carbon footprint, heavy metal footprint, antibiotic footprint, water footprint, nitrogen and phosphorus footprint and biogas slurry and salt footprint, as well as for monitoring the processes from feedstuff processing and production, discharge of biogas slurry to the farmlands, to subsequent agricultural products, thereby systematically controlling the resources consumption and emissions during the production and breeding process.

Calculation and reduction of greenhouse gas emissions

Based on the greenhouse gas accounting guidelines published by the United Nations Climate Commission, and our actual production situation, Muyuan accounted for the processes including feed processing, enteric fermentation, fecal management, low carbon emission reduction and energy consumption management. We examined raw feces composition, composition changes at different stages of feces management, etc. A carbon emission accounting system was preliminarily established.

In 2019, Muyuan calculated the carbon emissions of a farm in Hubei. We conducted comprehensive assessment on the greenhouse gas emissions during the whole process from production and breeding to application of biogas slurry to the farmlands. We monitored the emissions of methane, carbon dioxide and nitrous oxide. We quantified the emission reduction actions such as methane recycling and application of biogas slurry to the farmlands. Then finally we calculated the greenhouse gas emission in this farm to be 0.55 kg CO_2-equivalent per kilogram of live weight (0.55 kg CO_2e/kg live-weight).

Muyuan has set up a five-year carbon emissions planning target, which plans to achieve accurate collection of greenhouse gas emissions in the next five years, form a Muyuan clean production database, and continuously strengthen its low-carbon emissions reduction business efforts, so as to continuously reduce greenhouse gas emissions.



In 2019, Muyuan continued to promote the transformation of energy-saving projects and the application of new energy-saving technologies. We improved our energy management policy, optimised site configuration, and refined the process management so as to improve energy efficiency. As for the major energy sources, electricity and natural gas, Muyuan has adopted a series of energy-saving measures.

Energy-saving measures

Electricity saving	Natural gas saving
• Separate electric meters are installed in the environmental protection areas and production areas in the farms to monitor the use of electricity; • Energy-efficient processes are applied in the design of feed plant processes; • Energy-efficient feed equipment and electrical equipment such as energy-saving transformers, motors and other electrical equipment have been adopted; • Equipment is adjusted to operate automatically as fully loaded as possible, reducing its idle waiting time; • Biogas produced by anaerobic fermentation is used for integrated power generation or as an alternative to natural gas in boilers; in 2019, 1.69 million cubic meters of biogas was used to generate electricity of 3.388 million kWh; • "Turn lights off when leaving" is advocated and the air conditioning temperature is also under strict control.	• High thermal efficiency boilers with design efficiency above 98% are selected; • Energy-saving devices and condensers are installed for boilers to ensure the exhaust gas temperature is below 80°C; • The insulation thickness of steam/hot water pipelines is greater than 10cm, reducing heat loss during steam and hot water transfer; • Energy-saving traps are used in workshops to reduce steam waste in the drainage process; • Boilers were converted to utilise both natural gas and biogas, with priority given to the use of self-produced biogas; in 2019, the renovation projects in 11 regions were completed, saving 642,000 cubic meters of natural gas.

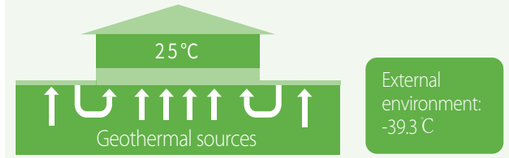
Energy saving: unheated hog houses

Muyuan has independently developed innovative unheated hog houses, all of which, without supply of heat, can maintain internal temperatures at 22~25℃, even under the extreme external conditions of around -40℃.

In the planning and design of the farms, Muyuan makes the door parallel to the predominant wind, ensuring efficient operation of the ventilation system, while applying insulation materials and spraying water onto the protective structure of the hog houses to reduce heat dissipation.

Air ducts are arranged inside the hog houses for heat exchange between fresh air and gas to be discharged. The heat is then transferred through the air ducts to the pigs' rest area, increasing the recovery of heat from waste gas emissions, lowering the exhaust temperature and reducing the heat dissipation. Minimum ventilation capacity of the heat recovery system can be properly set for the hog houses according to the indicators such as carbon dioxide, ammonia gas, oxygen gas and humidity of each unit air, and the air flow can be regulated through the intelligent environmental controller, enabling automatic internal temperature control according to the changes in the external environment, so as to ensure that environmental temperature in each cell remains stable.

Through the heat exchange system, gas heating in the winter is abolished. A total of 82.86 million m^3 of natural gas consumption was saved in 2019. Unheated hog house not only improves the survival rate of pigs in the winter, but also reduces the external heating cost, the energy consumption and the waste gas of boiler combustion, promoting the environmental transformation in pig industry.



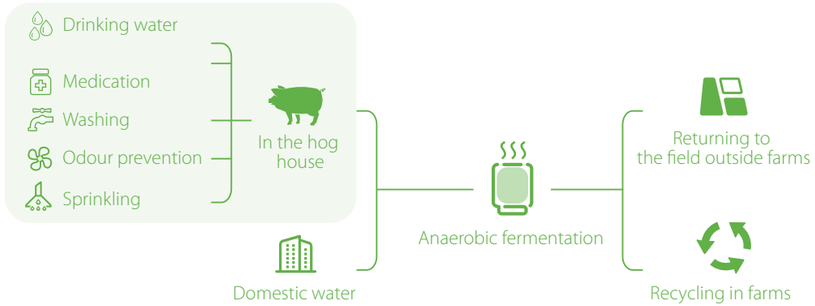
It' s like covering the ground with a blanket.
Advantages: 1. Reduce smog, 2. Create a more comfortable environment for pigs, 3. Lower cost and higher yield

cninf 巨潮资讯 www.cninfo.com.cn

In Muyuan, water is mainly consumed for production in the farms and household demands in the office premises. With the continuous expansion of the scale of farming , Muyuan actively responded to the national call to save water and resources " , has developed innovative breeding water-saving technologies, and thus formed a unique water-saving model. Muyuan conducts water-footprint management by monitoring the water consumption and proportion at various stages during the whole process of production and breeding in the farms, and by setting water consumption standards for each farm. We also adopt water-saving measures to reduce water consumption.

Water saving

Muyuan collects statistics on water consumption at different stages of pig farming. By installing accurate measurement equipment, such as measuring the total water consumption of each cell and water consumption of each type, Muyuan detects abnormal water consumption in time and avoids wasting water. Muyuan also adopts a parallel comparison mechanism for the same cells in different fields to control water consumption, thereby putting water conservation into practice.



In addition, a number of measures are taken to reduce water consumption during the breeding process.



The energy and water consumption of Muyuan in 2019 is showed as below:

Indicator	Unit	2019	2018
Total electricity consumption	MWh	802,396.62	674,940.00
Total gas consumption	m^3	20,251,905.33	6,710,208.64
Total gasoline consumption	L	6,180,599.74	4,586,100.49
Average water consumption per pig	m^3	1.6	1.6

Commitment to "Zero discharge"

Muyuan is committed to the strict control of the waste gas, waste water and solid waste generated during operation process. We properly handle the resultant waste and reduce the generation of emissions and discharge from the sources.

Odour treatment

Muyuan raised odour treatment to the company's strategic level and established the management goal of "treatment of odour, not disturbing the people", and thus formulated a series of policies and standards, such as the Odour Assessment Guidelines and Specifications on environmentally-friendly Deodorisation System. We also set up a six-level criterion for odour assessment, strictly implemented odour control measures, and conducted regular odour impact assessment in the operating areas, to optimise the odour treatment.

Muyuan developed an industry-leading three-prevention pig farms to control the odour source, and adopted the following processes such as odour reduction from the source, process monitoring, effect tracking, sealed deodorisation, etc. to minimise the odour in the farms, and further to ensure that it does not have a major impact on the surrounding residents.

Wastewater and waste management

The wastewater and wastes generated from breeding mainly include pig excrement. Muyuan formulated a series of policies such as the Management Measures for Wastewater from Farms and other policies to strictly prevent excrement spillage or leakage, while implementing a "planting & breeding circulation model" to recycle pig excrement, achieving zero effluent.

Muyuan established a drainage system for separation of rainwater and sewage, allowing the rainwater to be discharged to the fields and trenches outside and the sewage to be collected through the wastewater pipelines. Household wastewater and disinfecting wastewater are centralized and gathered into septic tanks or nearby collection tanks for integrated use after treatment and are prohibited from flowing into stormwater drains or off-site trenches.

For the medical wastes generated during the production process, Muyuan developed a Medical Waste Management Policy, under which medical wastes are centrally collected, stored in separate medical waste temporary storerooms by category, and regularly delivered to qualified institutions for treatment.

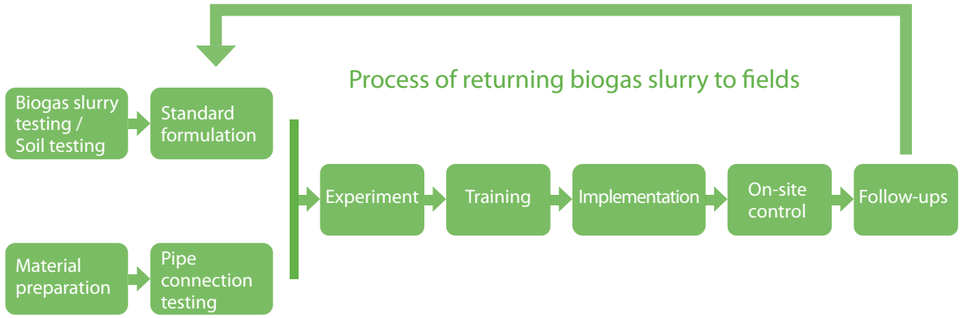
Amount of wastewater and wastes generated and treated in 2019 is shown in the following table:

Indicator	Unit	2019
Per head on the market of sewage production (wastewater)	m^3	1.02
Length of pipelines laid for returning biogas slurry to field	m	4,960,000
Area of fields irrigated by biogas slurry	mu (=666.7 m^2)	960,000
Per head on the market of solid pig excrement produced	Ton	0.039
Treatment rate of solid pig excrement	%	100
Per head on the market of organic fertiliser produced	Ton	0.013
Discharge of COD and ammonia nitrogen (in wastewater) of farm	Ton	0

cninf 巨潮资讯 www.cninfo.com.cn

Construction of an ecological cycle

In order to promote waste treatment, Muyuan adopts an integrated ecological cycle of "breeding - biogas manure - ecological agriculture" , and upgrades animal manure treatment from "harmless disposal" to "recycling of resources" . Wet and dry pig manure and urine produced in the farms are separated, and then the solid portion is processed into specialised fertiliser for sale; the liquid portion is treated through anaerobic fermentation, with the biogas produced for self-use and power generation in the farms. Biogas slurry is temporarily stored in the farms as fertiliser, and subsequently transported through the pipe network to the surrounding farmlands during the fertilisation seasons, so that the wastes are completely recycled.





In order to find the best solution for biogas slurry application for different regions, Muyuan carried out experimental research on 16 major crops, propagandised the demonstration farmlands in 65 counties and invited agricultural technical specialists to provide agricultural technical services for farmers.

Muyuan has laid a supporting agricultural pipe network for the surrounding farmers within 3-5 km around the corporate farm, so as to facilitate biogas slurry application among farmers; as of the release date of the Report, the length of the pipelines has reached 5.79 million meters, with a total investment of 550 million yuan.



In 2019, the length of pipelines for returning Muyuan' s biogas slurry to fields reached 4.96 million meters, and the area of fields irrigated by biogas slurry was 960,000 mu, with fertiliser applied per mu of farmland being decreased by 17% on average. 2,194 rounds of agricultural and technical services were provided to a total of 90,705 farmers from 355 villages, covering crops including wheat, corn and other crops in Central China, rice in Jiangsu Province, Hubei Province, etc., apples in Shanxi Province, and kiwi fruits and golden pears in Nanyang City.

It is estimated that, on average, application of biogas slurry contributes to approximately a 12% increase in output, thereby forming a green farming model. Though this model, the pig raising and crop planting could promote each other, and they are combined in pursuit of scientific development.

Protecting the Ecological Environment

While creating value, Muyuan actively explores ways to reduce the impact on the ecological environment, e.g., by identifying environmental risks in the early stages of project construction, developing environmental protection programs, selecting sites in strict alignment with ecological planning, and signing land restoration agreements with the government, so as to continuously promote green transformation and upgrading of farms.

According to the requirements of the policies such as the Technical Specifications for the Prevention and Control of Pollution from Livestock and Poultry and the Technical Specifications for Harmless Treatment of Livestock and Poultry Excrements, and the local regulations specifying the areas prohibited or restricted for breeding, Muyuan strictly controls the site selection and planning of farms, feed plants, organic fertiliser plants and hazard-free treatment plants, and follows the following principles during the site selection process:



- Subjecting all construction projects to approval on environmental impact assessment;
- Complying with the relevant laws and regulations to ensure the sanitary protection distance;
- Complying with regulatory requirements and avoiding the building of livestock farms and organic fertiliser plants in prohibited areas, such as drinking water protection areas, scenic spots, core areas and buffer zones of nature reserves, urban and town residential areas (including cultural, educational and scientific research, medical, commercial, industrial, and tourism areas with concentrated populations), as well as other areas prohibited for breeding or requiring special protection as prescribed by local governments or laws and regulations;
- Selecting sites of feed plants in line with local industrial planning, including park planning, land use planning and spatial development planning;
- Comprehensively considering several elements, such as surrounding crops and fertilisation practices, water resources, surrounding farms, and surrounding heavily polluting enterprises.

During and after the project construction, Muyuan afforests the corresponding areas according to the surrounding planting characteristics with local plants, thus minimising the impact on the land and ecological environment. Muyuan monitors and assesses the water resource risks of the project location. We follow up the impacts on the environment arising from application of biogas slurry to the farmlands. We select proper monitoring locations for long-term continuous monitoring of groundwater, surface water, soil, etc. We also conduct sampling and monitoring activities twice a year to detect the surrounding environment quality and to further ensure that the application of biogas slurry to the farmlands does not cause pollution to the surroundings. In addition, we also assess the improvements to soil fertility, including desert and saline-alkali soil resulting from the application of biogas slurry based on the annual changes in soil nutrients.

Saline soil improvement-- resource utilization of sea rice

In 2019, Caoxian Muyuan Livestock Co., Ltd. (Caoxian Muyuan), a subsidiary of Muyuan, launched the project of sea rice production in saline soil. 300 mu of sea rice were planted and 55 m^3 of biogas slurry were applied to each mu of farmland on average, saving 13,200 kg of fertiliser. According to the testing results, total salt content and organic matter changed to 0.94 g/kg and 12.67 g/kg, which were 2.77 g/kg and 8.62 g/kg before planting. The project effectively reduced soil salinization and increased soil organic matter, vigorously promoting local ecological environmental improvement and agricultural economic development and realising the sustainable development of fertiliser reduction and soil improvement.



cninf 巨潮资讯 www.cninfo.com.cn

05 Work Together

Sharing the Value of the Industrial Chain

Help customers succeed. Do unto others as you would have them do unto you.
Treat people sincerely. Assist the customers with all our heart. Be fair and impartial, open and transparent, simple and trustworthy to achieve cost-effective and win-win results.

— Muyuan Basic Law



Highlights

- Suppliers that signed formal contracts: **100%**.
- Proportion of electronic procurement: **100%**.
- Rate of signing environmental protection agreements: **100%**.
- Rate of signing integrity agreements: **100%**.
- Establishing cooperative relationships with **2,543** suppliers across China.

cninf 巨潮资讯 www.cninfo.com.cn

Strengthening Supplier Management

Upholding the concept of "Be fair and impartial, open and transparent, simple and trustworthy to achieve cost-effective and win-win outcomes" , Muyuan upholds integrity and self-discipline to create a fair and impartial business environment. Our suppliers mainly offer raw and auxiliary materials, veterinary vaccines, a wide variety of materials and engineering materials.

As of the end of the reporting period, Muyuan has established cooperative relationships with 2,543 suppliers across China.

Supplier acceptance

Based on Muyuan's standards for acceptance of various suppliers, we have identified qualified suppliers as our partners through on-site inspection, pre-qualification, preliminary assessment, quality assessment, cooperation commitment and cooperative investigation.

Supplier management

To manage suppliers by category, Muyuan has established corresponding management and evaluation systems, continuously monitoring suppliers' strengths, quality management, fulfilment capability, cost advantage, environmental protection, integrity, etc., and issuing supplier evaluation reports.

Supplier evaluation and incentives

Based on periodic supplier evaluation system, Muyuan divided suppliers into four grades of AAAAA, AAA, A, and B based on quality, price, delivery and service, and granted corresponding rewards or penalties. Excellent suppliers will be awarded the title of "Muyuan AAAAA Grade Supplier". Muyuan will establish a deep strategic partnership with such suppliers and increase the order volume. Those awarded with such title for a successive six years will be honoured with "Gold Supplier" and with a "Good Pig Award". Unqualified suppliers will be placed on Muyuan's list of blacklisted suppliers and be disqualified from cooperating.



Delivering Sustainable Value

Muyuan attaches importance to the control of the environmental and social risks of suppliers and requires each supplier to sign and strictly execute the documents such as the Environmental Protection Commitment to strengthen environmental protection. Muyuan requires suppliers' products, raw materials, production processes and services to comply with the laws and regulations relating to environmental protection, prohibition of child labour, equal employment, and occupational health and safety. At the same time, Muyuan urges suppliers to adopt non-polluting or less-polluting production processes, equipment and construction methods, and to properly dispose of wastes and reduce pollutant emissions.

Muyuan also signs the Integrity Agreement with partners to jointly combat commercial bribery, corruption, unfair competition and commercial fraud. Muyuan's Integrity and Self-discipline Management Policy strictly prohibits employees from receiving any money or gift from suppliers and strictly resists commercial bribery during the procurement process.

Sustainable soybean procurement

Cargill, Muyuan's major auxiliary materials supplier, is one of the largest soybean crops traders in the world. It has been working with the industries, government and NGOs, and rolled out a soybean moratorium plan in Brazil, committing themselves not to buy soybeans from farmers who cut forests and grow soybeans in the Amazon ecological zone, so as to jointly promote sustainable agricultural development.

Control of environmental and social risks of construction-related suppliers

Muyuan includes construction-related suppliers in its own environmental management, adopting specific preventive measures to control their impacts on the environment during construction, such as water, air, noise and solid waste pollution, and water and soil erosion. Muyuan requires the constructors to adopt scientific construction methods, such as the regular spraying of water, placing dust screens, and installing acoustic enclosures for equipment, to reduce environmental pollution.

Muyuan also imposes strict requirements on the safety management of construction-related suppliers, requiring them to obtain production safety licenses, sign construction safety agreements, establish and improve safety production accountability systems and safety production education and training, and formulate safety production regulations and operating specifications, etc. Muyuan also requires the construction-related suppliers to provide firefighting equipment and labour protection supplies to the workers and put forward requirements for controlling the safety risks during construction, to safeguard the safety of the workers.



In addition, in order to avoid delays in the payment of wages by suppliers to migrant workers for the construction projects, Muyuan requests the project supervisors to strengthen communication with the construction teams and migrant workers, and to pay the migrant workers at the scheduled payment time of each project. In order to further safeguard the rights and interests of the migrant workers, Muyuan also collects certain special deposits for wages of the migrant workers from the constructors. In case of wage arrears, Muyuan will pay the migrant workers directly with the deposits.

cninf 巨潮资讯 www.cninfo.com.cn

Co-constructing Industrial Chain Ecology

Muyuan is committed to working in depth with suppliers to maximise industrial chain benefits through the strategic development path of "general procurement - procurement by tendering - strategic procurement - ecological procurement", thereby achieving efficiency and a win-win outcome. Focusing on the vision of "maximising the supply chain benefits to achieve efficiency and win-win outcomes and promote social progress", we have established the following cooperative strategies:

Developing strategic relationships and engaging in win-win cooperation to promote social progress

- Exceptional — Become industry leader, and drive social progress
- Excellent — Help clients to achieve success, lead industrial development and earn respect from others
- Great — Achieve success, cooperation and win-win results

Muyuan constructs ecological industrial clusters around core enterprises. Based on the strong supporting policies from the local government, Muyuan helps suppliers solve their financing difficulty and other development bottlenecks and helps reduce production and operation costs; Muyuan also integrates resources of regional financial institutions, and supports those institutions to break through the development bottleneck to realize leapfrog development; meanwhile, Muyuan introduces high-quality upstream suppliers to the local area, which helps improve the county economy, increase local taxes, and ultimately achieve a win-win situation.

Supply Chain Finance

In 2019, Muyuan helped 274 small and medium-sized enterprises and 25,504 households in the supply chain, spending an amount of over 1.37 billion yuan. Through the financing modes, such as commercial bill pledge, factoring and guarantee financing, Muyuan's supply chain enjoys great economic and social benefits. The innovative "group purchase" development mode and risk control means greatly improved the revenue-cost ratio of small and medium-sized enterprises, magnifying the scale economy effect.



For example, Shandong Huali Mechanical and Electrical Co., Ltd., whose main business is generator set materials, has achieved multiply increase in its business volume through integrating the government, banks and Muyuan's supply chain platform, and has achieved mutual benefit and win-win results. From 2018 to 2020, Huali has cooperated with Muyuan in the amount of 35 million, 112 million and 800 million respectively.

Driving the Development of the Industrial Chain

Muyuan has developed deep relationship with excellent suppliers to carry out joint R&D, and to continuously upgrade technologies and equipment, with the view of common development and growth.

Joint innovation and win-win cooperation

Neixiang Changxing Equipment Co., Ltd. is the whole-site cleaning system supplier of Muyuan and has been cooperating with Muyuan since 2000. Muyuan made concerted efforts to develop and design the whole-field cleaning system and pursue continuous optimisation and upgrading, resulting in a total cooperation of 300 million. As a result of this, the supplier obtained greater impacts in the industry and became a benchmark company for producing whole-site cleaning systems.





The upgrading of new pig houses and the continuous growth of the Company have expanded the demand for air filters. Muyuan cooperated with domestic air filter manufacturers to jointly research and develop and help reduce the average cost of air filters from RMB 700 to RMB 200. The cooperation changes the former industry dilemma of high market saturation, high production cost and small market space, and helps many close-to-collapse enterprises to regain development. At present, the air filter demand of Muyuan has accounted for 80% of the total domestic industry capacity, which promotes the development of the industry.

Henghui Agriculture and Animal Husbandry Company was founded in 2014 by the former staff of Muyuan. With the strong support of Muyuan, the county Party Committee and the local government, Henghui became one of the first batch of enterprises to settle in the Agricultural and Animal Husbandry Equipment Incubation Park in Neixiang County in 2017. Henghui insists in its mission, exerts to its utmost, and always upholds its business philosophy of "serving customers wholeheartedly". In 2019, Henghui achieved sales revenue of 330 million yuan and paid taxes of 10.32 million yuan, promoted employment of more than 1,000 people, and donated social welfare donation materials equivalent to 1.5 million yuan.



In 2020, the goal of Henghui is to achieve sales revenue of 0.8-1 billion yuan and paid tax of 20 million yuan, and to realize a "double 10 double 100 double 10 million yuan" target ("double ten double hundred" refers to the income of 10 internal employees and 10 external partners will reach 1 million yuan; "Double 10 million" means that the company's and the installation project's tax revenue both reach 10 million yuan). Henghui is committed to establishing a platform for common development and mutual benefit.

cninf 巨潮资讯 www.cninfo.com.cn

Developing Comprehensive Communication

Muyuan develops international procurement channels and procurement networks and tunes a broad views of procurement. We set up various communication channels and platforms and take the initiative to engage in exchanges with suppliers to discuss industry hot issues, for joint progress.









Foreign procurement inspection



Supplier conferences



Technical exchanges with veterinary vaccine suppliers



We participated in the China Feed Amino Acids and Feed Raw Material Application Symposium to introduce application technology and promote less common varieties of amino acid in pig feed. The Symposium boosted technologies related to low-protein diets in China and the application of less common varieties of amino acid in feed, contributing to decrease of protein and nitrogen emission, and reduction of environmental pollution and the occurrence of diseases.

Enhancing Customer Experience

Customer Service Philosophy

With adherence to the service concept of "help customers succeed", Muyuan keeps improving service quality through continuous innovation, and optimising communication channels for customers to create value for customers and enhance their social recognition and influence.

Customer Management Optimisation

Muyuan has built a full-chain system integrating pre-sale, in-sale and after-sale services, implemented front- and back-end service mechanism for major customers, and optimised customer management to ensure customers have a good cooperative experience.

Pre-sale

Accurately control the quality of pigs and ensure their health; assess the customers' farming technology and conditions of pig houses and then formulate a targeted service plan.

In-sale

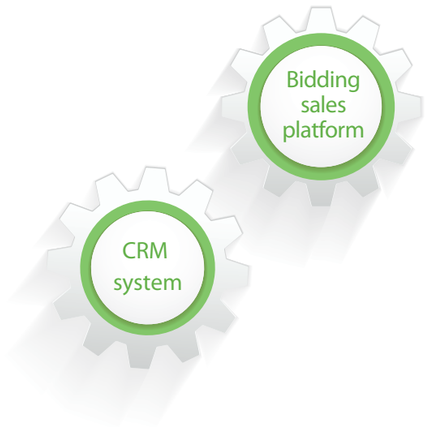
Optimise sales processes to ensure the plan is executed smoothly and efficiently.

After-sale

Pay attention to customer feedbacks and comments, conduct follow-up visits to monitor the growth of pigs and provide nursing programs to ensure the healthy growth of pigs purchased by customers.

Muyuan has exerted every effort to build a bidding sales model, allowing customers to voluntarily bid on the same platform through an information-based sales bidding platform, practically implementing the principle of "zero negotiation, zero intervention, zero privileges and zero credit".

A complete, standard management process was formulated through Muyuan's customer relationship management ("CRM") system. We developed working standards for six aspects and 30 specific projects, including potential customer maintenance, customer access and approval, customer cooperation management, customer relationship maintenance, customer exit management and customer complaint management. Furthermore, a complete customer database was established for improving the customer service management in all regions, to optimise the business processes, standardise customer services, and guarantee the quality of our services.



cninf 巨潮资讯 www.cninfo.com.cn

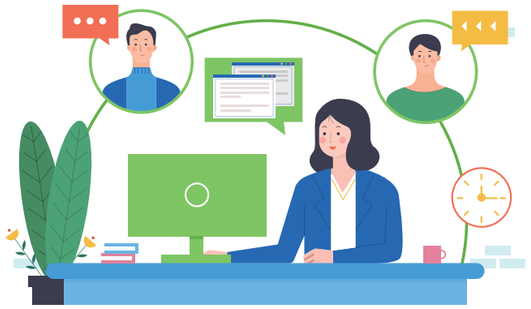
Protecting Customers' Rights and Interests

Muyuan resolutely safeguards the right-to-know, right-to-choose, and other legitimate rights and interests of the customers, and designates specific customer information liaison persons to avoid forced sales. Muyuan draws up marketing risk mapping, formulates codes of conduct for business personnel, establishes mechanisms for pre-job training and regular upskilling training, and clarifies requirements on information confidentiality, business connection, communication standards, and complaint handling in strict accordance with the requirements of the Advertising Law of the People's Republic of China.

Muyuan respects customer privacy and makes efforts to protect customer's information security. The Company uses CRM system to maintain and manage customer data and daily information which only allows access by staff with appropriate rights corresponding to their positions, to effectively prevent customer information leakage. Muyuan develops internal information security management policies, for which, the Company has established a monitoring mechanism, and it requires employees to sign a confidentiality agreement, forming a management and control system that effectively protects customer privacy and information security.

Improving Complaint Handling Mechanisms

To effectively protect the interests of customers, Muyuan keeps optimising the Company's complaint handling mechanisms. By upholding the principle of "responding to every complaint, handling case by case, replying to each inquiry, and reaching consensus", the Company has arranged a dedicated customer service hotline and set up a customer-specific business manager to actively communicate with customers and know their needs, and to help solve their problems in their transaction in a timely and efficient manner.



Acceptance
Make initial judgement of the nature of customer's complaint and give customer effective reassurance.

Assignment
Assign the complaint responsible person, and report to the designated person immediately in case of significant complaint.

Processing
Combine with the facts to formulate solutions according to the Company's policies for specific problems.

Call back
Conduct customer return calls within 24 hours to ensure customer satisfaction in handling complaint.

Improvement
Analyse the causes and formulate management plans to prevent recurrence

Customer Complaints Handling Process

Muyuan Insustrial Group Co., which is an entity beyond the Scope of the Report, actively promotes the construction of industrial cluster area and is explained as follows.

Creating an industrial cluster

Muyuan is at a stage of rapid development, with the demand for certain building materials dominating the market, even exceeding the market supply by several times. Considering the facts of each business, Muyuan integrates supply chain resources and allocates demands to the upstream and downstream enterprises to achieve a win-win result for all.

In the future, enterprises involved with agricultural and husbandry equipment will gather in Neixiang County, bringing forth a large gathering of logistics, talents and information flows, which will cater for the equipment needs of the entire livestock industry. More resources are expected to be consolidated to create an ecological platform centred around Muyuan with numerous small and medium-sized enterprises. We aim to help suppliers grow and reduce costs, and ultimately succeed together. In the future, focus will be put on competition among ecological chains, rather than among enterprises.

The state-of-the-art agricultural and husbandry equipment industrial park launched by Muyuan is planned to cover a total area of about 1,500 mu and cost an investment of 3 billion yuan. The park is estimated to have an annual value of 15 billion yuan, to help create 4,713 jobs and to generate RMB 350 million of tax revenue. The first phase of the park will be started in October 2020, put into operation in succession by the end of 2020, and is expected to be completed by the end of 2021. After completion, it is expected to be able to attract 200 enterprises to settle, realize an annual output value of RMB 5 billion, boost tax revenues of RMB 150 million, and absorb more than 2,500 local employees.





Illustrative drawing of the frist-stage project of the agricultural and husbandry eqiupment industrial park

cninf 巨潮资讯 www.cninfo.com.cn

06 Muyuan Ju'ai

Supporting Public Welfare

Combine knowledge with practice to benefit society.
Develop public welfare programs and be devoted to educational improvement to drive social and economic development.
Adhere to our values and build a sharing platform.

— Muyuan Basic Law



Highlights

- Muyuan has been engaging in education assistance and donated a total of **400** million, covering **83** counties (regions) in **13** provinces. We have funded **18,225** university students and **169,586** primary and secondary school students and rewarded **14,377** outstanding teachers.
- Muyuan is committed to public welfare and has donated a total of **173,197,400** to that purpose,, benefited **164,814** households and **426,233** people.

cninf 巨潮资讯 www.cninfo.com.cn

Upholding the concept of “Creating value, Serving society”, Muyuan actively undertakes its social responsibilities. The Company goes deep into communities where it is located to learn about the actual development needs, and gives targeted support focusing on education, infrastructure construction, and other areas concerning people's livelihood, devoting itself to public welfare.

Assisting in Education by the Ju’ai Project

Education goes ahead of poverty alleviation. Muyuan insists on taking the education in impoverished areas as its duty. For this purpose, the Company has implemented the “Ju’ai Project-Spring Rain Program”, “Ju’ai Project - Golden Autumn Program” and the “Ju’ai Project - Spring Seedling Program” to support the development of rural education by establishing a long-term mechanism that helps the poor and those in need, and awards excellent performers.

> “We know that by cultivating an excellent student, we can warm a family, sow a hope, shape a future, and make the whole society better off.”
>
> Mr. Qin Yinglin, Chairman of Muyuan

Ju’ai Project - Spring Rain Program

This program rewards excellent elementary school teachers, and provides health checks, etc. to motivate their teaching enthusiasm and improve the educational level in rural areas, changing the status of rural education. At the same time, these actions have attracted attention from all sectors of society to rural education, and more and more forces have joined in to contribute to the development of rural education.

In 2019, Muyuan donated 40.19 million yuan in total, and awarded 9,735 outstanding educators and 570 educational units, benefiting 93,000 students in 16 counties (districts) in 8 provinces including Henan, Shanxi, Shaanxi, Hebei, Inner Mongolia and Liaoning. In addition, Muyuan also input 148,700 and worked with health check centres to customise health check packages for rural teachers, helping 301 award-winning teachers in 32 schools to check for health concerns.



Teacher Award Ceremony in the 14th “Ju’ai Project - Spring Rain Program”



Health Check for Teachers

Ju’ai Project - Golden Autumn Program

This program is to alleviate poverty through education and stop the intergenerational inheritance of poverty by funding underprivileged students to smoothly graduate from universities or colleges. This program has not only helped to cultivate outstanding talents, but also motivated local enterprises and people to participate in the educational assistance campaign, forming a more encouraging and fertile environment for education.

In 2019, Muyuan funded over 7,000 underprivileged university students with a donation of RMB 19,387,600, covering 77 counties (regions) in 13 provinces, including Henan, Hubei and Heilongjiang.

In 2019, over 800 excellent students in Neixiang Country received supports; of those, Muyuan funded 417 directly and mobilised more than 70 other enterprises and organisations to fund more than 400 students, creating a favourable educational assistance environment and basis in the local area.



The 12th “Ju’ai Project - Golden Autumn Program” Scholarship Awarding Ceremony

In 2019, Neixiang Muyuan Education foundation, and Zhongxiang Muyuan Poverty Alleviation Foundation contributed a total of 4.2169 million yuan, which were used as education subsidies for pre-school stage, compulsory education stage and senior high school students and as travel expense subsidies for university students, relieving 6,786 students’ economic pressures of high tuitions.

In order to further promote poverty alleviation through education, prevent students dropping out of school because of family financial difficulties, and help more outstanding students plan and get better growth, Muyuan implemented a series of measures, including Talent Program, Alumni Association, Ju’ai Project-Golden Autumn Program; through those measures, together with the national tuition subsidy, student loan reimbursement, Zhuge Talent Program and other policies, students can benefit from the preferential policies of the state, the enterprise and the university at the same time, so that they can realize their dream of entering into the university and successfully complete their studies. In 2019, Muyuan set up a team of 20 volunteers to assist more than 3,300 new college students to apply for student loans from their places of origin, and assisted 813 people to apply for Zhuge Talent Program, with a total amount of declaration of 3.88 million yuan.



Loan processing assisted by volunteers

Ju’ai Project - Spring Seedling Program

Muyuan donates schoolbags and stationery for children in rural areas to help improve local educational conditions and send care and warmth to the children.

In 2019, Muyuan’s donation benefitted 86,123 primary school students from 61 counties (regions) in 12 provinces, including Henan, Hubei, Shandong, etc.



Distribution of Schoolbags through “Ju’ai Project - Spring Seedling Program”

cninf 巨潮资讯 www.cninfo.com.cn

Case Study: Ju’ai Project - Spring Rain Program

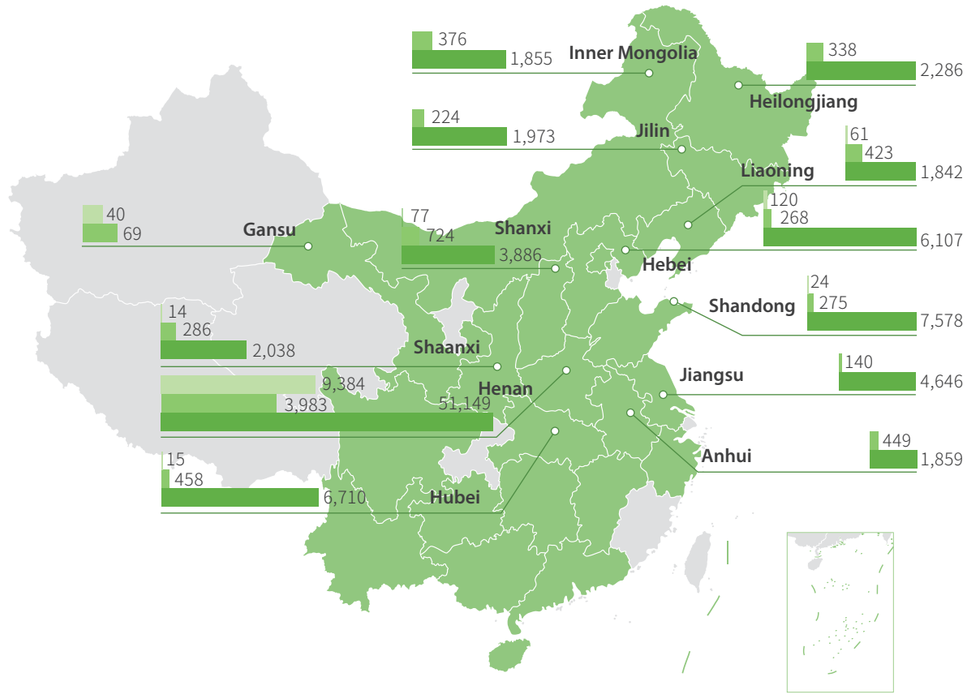
Xilaohezhai Primary School is located at Banpodian Village, Huaxian County, Anyang City, Henan Province. This school is an impoverished school with a lower ranking in overall scores among other village and township schools. To mobilise the teaching enthusiasm of rural teachers, Muyuan contributed 94,500 yuan through the “Ju’ai Project - Spring Rain Program” , to reward outstanding educators in this school. Xilaohezhai Primary School went up from 10th to 3rd among township schools in terms of students’ scores.



The teacher from Xilaohezhai Primary School rewarded by the Ju’ai Project

Implementation Profile in 2019 of Muyuan Ju’ai Project

Spring Rain Program（the number of awarded persons）
Golden Autumn Program（the number of awarded persons）
Spring Seedling Program（the number of benefited persons）



Supporting Community Construction

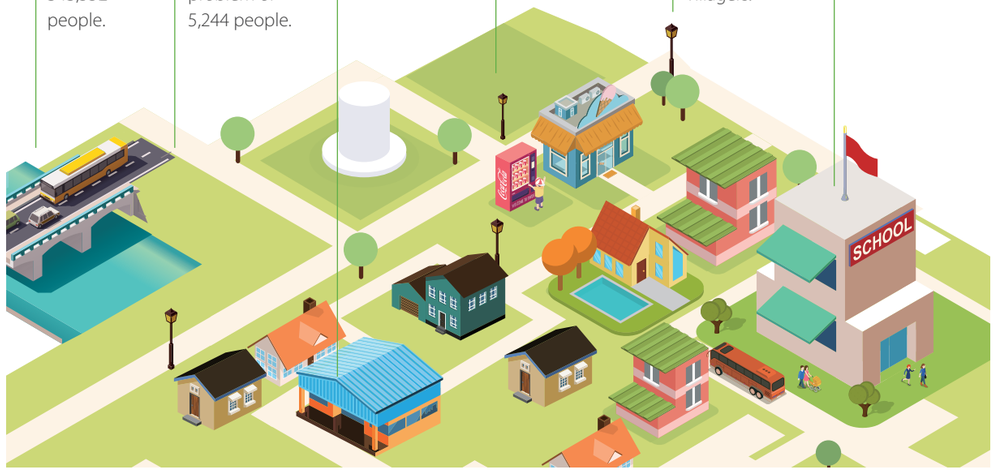
While seeking for self-development, Muyuan keeps in its heart to give back to society with gratitude. Supported by the Company’s advantages and resources, Muyuan actively promotes community development and devotes itself to public welfare and charity.

Assisting in Rural Revitalisation

Infrastructure construction is the basic guarantee for people's livelihood and is also the foundation and prerequisite for impoverished areas to achieve poverty alleviation and realise prosperity through industrial development. Over the years, Muyuan and its parent company have input 712 million to help impoverished areas to build roads and bridges, construct drinking water projects, construct cultural squares, improve the teaching environment etc. This improved the living quality of residents, created a favourable environment and conditions for industrial development in impoverished areas, and laid a solid foundation for poverty alleviation.

In 2019, Muyuan donated 128,749,200 yuan to support the construction of community infrastructure, benefiting 151,944 households and 405,278 people.

- Donated 126,441,500 yuan to repair 278,600 meters of roads, which solved the travel problems of 343,552 people.
- Donated 912,100 yuan to lay 54,815 meters of drinking water pipes in 10 community villages, which solved the drinking water problem of 5,244 people.
- Donated 491,600 yuan to build 19 “love supermarkets”.
- Donated 46,300 yuan to construct 2,577 m^2 of cultural squares in 4 community villages, which benefited 5,988 people.
- Donated 447,200 yuan to install 2,282 streetlamps for 12 community villages, lighting up the way going out at night for 50,494 villagers.
- Donated 3,012,700 yuan to 15 schools for school construction, school cultural activities and the purchase of tables and chairs.



At the same time, 1,574,600 was donated to 24 community villages in 14 counties (regions) of 8 provinces to help renovate infrastructure, improve village committees and purchase office facilities, contributing to the undertaking of rural revitalisation with improved collective office conditions and optimised community environment.

cninf 巨潮资讯 www.cninfo.com.cn

Helping Those in Distress and Relieving Those in Need

As an active member in promoting China's traditional virtue of "helping those in distress and relieving those in need", Muyuan has been sending care to socially disadvantaged groups. The Company keeps providing donations to support people's livelihood and conducting targeted assistance to disadvantaged groups to help more people in need. In 2019, Muyuan donated 44,448,200 to help those in distress and need, benefiting a total of 12,870 households and 20,955 people.

Caring for left-behind children

There are 320 primary school students in Fenglou Primary School at Guhuai Street, Pingyu County, most of whom are left-behind children. In 2019, Muyuan worked with the school and education departments to donate 60 sets of desks and chairs, 20 computers, and 320 schoolbags to Fenglou Primary School to improve the learning environment and send warmth to the children left behind.



Creating a Public Welfare Ecology

Through its public welfare activities, Muyuan has gradually created a public welfare platform accessible to everyone, encouraging and mobilising the broad participation of volunteers, and has formed a complete volunteer management mechanism. In addition to university student volunteers, Muyuan also actively organises employees to participate in public welfare activities, spreading the public welfare ideas of Muyuan along with extensive involvement of both internal and external volunteers in public welfare activities, and creating a favourable public welfare ecology. In 2019, Muyuan public welfare platform organised more than 3,100 volunteer services totalling 31,000 hours, including more than 500 volunteer services by university students and about 2,600 by Muyuan employees.





Voluntary blood donation

In 2019, Muyuan headquarters initiated voluntary blood donation activities themed "with boundless love, and linked by blood, Muyuan is in action for voluntary blood donation", which attracted 110 employees to participate and which lead to the donation of 43,800 ml blood in total.





"For me, Muyuan is a very responsible company that is concerned about public welfare and acts in response to the call of the state to participate in the fight against poverty. I am very honoured to be one of Muyuan's volunteers. It is within my ability to distribute schoolbags to children, while the happy smile on the child's face makes me feel that everything is beautiful. I will participate in more volunteer activities of this kind and play my part in it!"

— University student volunteer



"I was lucky to be part of this event which gave me the chance to see the kids' hopes for the future. I was excited and happy to see the happy smile and felt that everything was worth it. Participation in these public welfare activities enables me to exercise different personal values. In the future I will pay attention to and participate in more public welfare activities, bringing warmth to more people."

— Employee volunteer

Entities beyond the Scope of the Report have also made important contributions to Muyuan's public welfare undertakings, specifically involving the major participation of Muyuan Industrial Group Co., Ltd. and the Chairman Qin Yinglin, etc., and are explained as follows.

Contributing the construction of Westlake University

On February 15, 2019, Mr. Qin Yinglin, Chairman of Muyuan, donatedshares in Muyuan with market value of RMB 100 million to Hangzhou Westlake Education Foundation. On 20 April 2020, Qin Yinglin voluntarily donated, for the second time, shares in Muyuan with market value of RMB 800 million to Hangzhou Westlake Education Foundation to support basic research and cutting-edge technological innovation of Westlake University and assist the university in personnel development, teaching and technological research.



cninf 巨潮资讯 www.cninfo.com.cn

07 People-Oriented

Contributing to Their Happiness

Be people-oriented and bring benefits to employees. Treat employees as families to help them develop. Build career platforms to help them realise worth in life; let every employee and every family be happy and enjoy a happy life in the paradise of Muyuan.

— Muyuan Basic Law



Highlights

- Total employees: **50,319**, which is **167%** more than that of 2018.
- Training coverage: **100%**.
- Upgraded compensation structure from platform compensation to comprehensive compensation.
- Total promotions: **4,032**.

cninf 巨潮资讯 www.cninfo.com.cn

Introducing Talented People

Muyuan attaches great importance to talent introduction. Combined with the actual business needs, we hire specialists in science in intelligence, mechanical, and energy engineering in management, finance, food, etc. We strive to accelerate industrial transformation through technological innovation, and lead the way in smart pig breeding. During the reporting period, Muyuan recruited nearly 10,000 university graduates.

Talent concept

Staff selection principle - the virtuous root

People with pure characters and high social responsibility

Staff appointment principle - the value criterion

People with integrity, sticking to principles

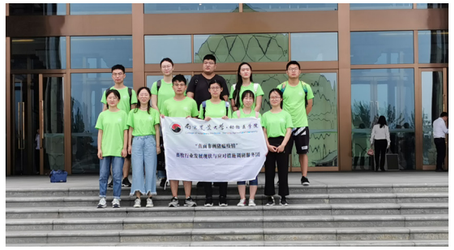
Honest people courageously taking responsibilities

Open-minded people willing to share and devote themselves

Strengthening university-enterprise cooperation for talent introduction

Since 2016, Muyuan has cooperated with universities and colleges across the country to jointly explore ways of cultivating applied talents and realised positive interaction between universities and enterprises. Muyuan has established close and friendly interaction with various colleges and universities, including China Agricultural University, Jilin University, Tianjin University, Jilin Agricultural University, and Nanyang Institute of Technology by ways of setting up a internship and employment practice opportunities, joint classes, technological cooperation, corporate study tours, etc., to jointly cultivate all-round talents with equal emphasis on theory and practice.

As of the end of the reporting period, Muyuan has trained more than 2,300 university students by joining up with various colleges and universities.

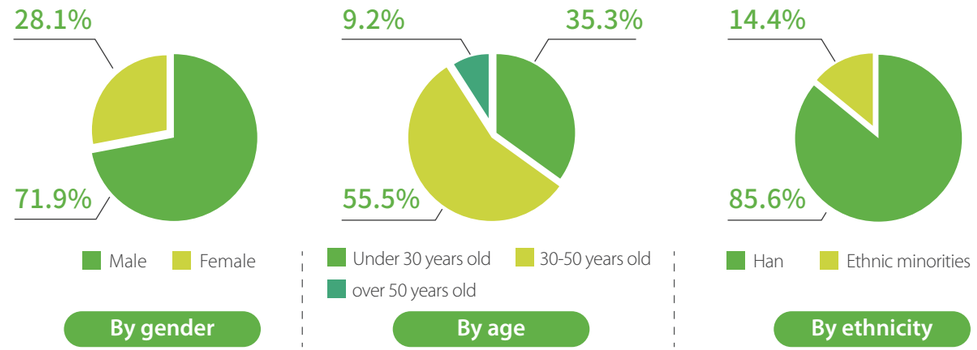


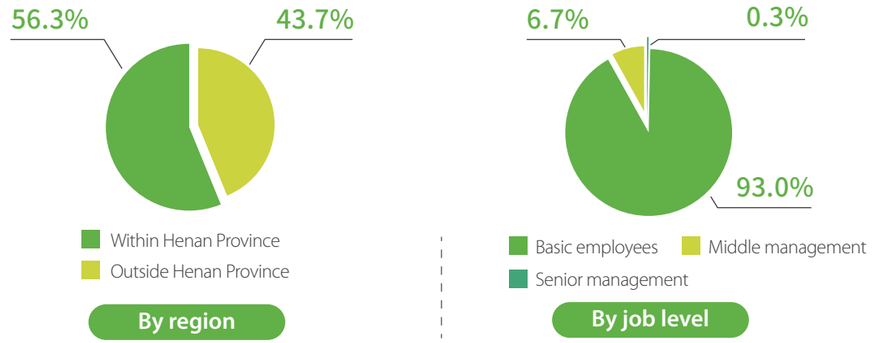


Muyuan strictly abides by the principle of "equal employment" during recruitment, and does not discriminate against any job applicant due to their race, gender, skin colour, age, family background, national tradition, religious belief, physical fitness, original nationality or other personal characteristics, ensuring that everyone is fairly treated at work. Muyuan has 8 employees in senior management now, 2 of which are female, accounting for 25%.

To strictly implement the requirements of laws and regulations such as the Provisions on the Prohibition of Using Child Labour, Muyuan prohibits any subsidiaries from recruiting juveniles under the age of 16, and completely eradicates the use of child labour. Muyuan puts vigorous efforts to support local workers and drives local employment. The Company hires workers in the locations where its subsidiaries are located to absorb local labour forces. And the rate of local employment is 84.86%. In 2019, Muyuan launched more than 2,000 job fairs for subsidiaries and hired more than 26,000 local labour .

As of the end of the reporting period, Muyuan had 50,319 employees working in full-time. The specific employee structure is as follows:





Guaranteeing Health and Safety

Muyuan adheres to the concept that "safety underpins employees' benefit and the legal operation of enterprises" and the principle of "prevention-first, and people-oriented, with managerial responsibility policies" for the management of production safety, strictly guaranteeing the health and safety of employees.

In accordance with the Work Safety Law of the People's Republic of China, Penalty of Fine in the Regulations on Reporting, Investigation and Handling of Work Safety Accidents and other relevant laws and regulations, Muyuan has formulated and updated relevant policies including the Manual on Standards for Safety Conducts of Employees and Provisional Measures for the Assessment of Personal Safety Accidents. Besides, the Company has established a mechanism for the management of production safety, and impresses the information on relevant rules and regulations, standard operations, risk maps, and other safety regulations onto employees to ensure that production safety training reaches to all staff.

Full Coverage of Production Safety Management Mechanism

All links coverage

Establish "company-department-farm" safety prevention and control mechanisms covering all links including new employee orientation, on boarding and daily operation, and directly relate the production safety management to the result of performance appraisal.

Company-wide coverage

Establish a company-wide production safety management mechanism, a production safety management model that is decentralised from the Company to the smallest business unit (i.e., from company to department to office to team), and develop a sound production safety training system to be implemented by the Company and all departments.

cninf 巨潮资讯 www.cninfo.com.cn

Muyuan organises on-board training on production safety for new employees every month, including rules and regulations, risk maps, standardised operations, etc. Only those who pass the exam after training can officially get to work. During the reporting period, Muyuan provided various production safety training (including drills) targeting at all employees, while department heads organised production safety case studies for employees at least twice per week, integrating production safety training into daily management. Muyuan organises training on production safety for all employees. Major trainings for Administration Department and other low risk groups include vehicle safety management, driving safety, electrical safety, etc. Major trainings for the front-line operations include pre-employment orientation on job risk maps, on-site construction safety, winter production safety, daily update conference on production safety incidents, etc.



Innovating Incentives

In 2015, Muyuan put forward its wealth goal:

realise the following goals in 10 to 20 years

Seeding Project: form 10,000 well-off families with a wealth of 1 million

Cultivating Project: form 1,000 rich families with a wealth of 10 million

Configuring Project: form 100 extremely wealthy families with wealth of 100 million

Muyuan follows the incentive principle of "those who create, will benefits; those who create first, gain first; those who create more, gain more" that shares the enterprise value with its employees. As at the end of the reporting period, Muyuan had implemented three Employee Stock Ownership Plans and one Restricted Stock Incentive, with over 6,000 employees holding 11.08% of the total share capital. The net return of phase I was 359%, and of phase III was 149%, which demonstrated that employees truly realised their life value and enjoyed an abundant life ahead of time in Muyuan.

Muyuan promoted the comprehensive compensation, in an effort to stimulate all of Muyuan employees through comprehensive compensation programs such as outstanding pay, equity allocation, learning, promotion, opportunities, honours and benefits, and made everyone a successful struggler winning the highest compensation with their abilities and performance so to realise their life values and enjoy an abundant life.

Explicit compensation		Implicit compensation			Others	
Outstanding Compensation	Stock rights	Learning	Opportunity	Promotion	Honours and trust	Benefits
Basic salary Performance bonus Bonus for long-term services Other awards	Loyalty + deliverables Stock allocation Stock incentive plan	Values Loyalty Deliverables Potential			Honours Trust	Pension insurance, medical insurance, unemployment insurance, work injury insurance, maternity insurance, and housing provident fund Zhuge Talent Plan Tuition compensatory House

Supporting Employee Development

Training System

Adhering to the concept of "Combining the selection system with training, cultivating a better person with tutelage from the best person, realising circular empowerment" , Muyuan has developed a complete training system and promotion mechanism to enhance the core competitiveness of employees and the Company alike while meeting personal development needs of employees.

Build an intelligent learning platform

Muyuan offers a wide range of courses to employees through an intelligent learning platform. The platform compares staff and position portraits to identify the gaps in employees' capabilities, promotes targeted courses based on job requirements, and provides learning, examination, certification, etc.

Improve training system

Muyuan develops a comprehensive training system to provide targeted trainings on values, management skills and business capabilities to management, university students, and vocational technicians.

Values training	Values concerning responsibility, value, wealth, etc
Management training	Vision management, goal management, method and tool training, performance management, team management, etc
Business trainings	Business trainings by departments: special class for Production Director/Field Director/Unit Head, subsidiary managers, veterinarians, etc Orientation for grassroots staff: safety, skills, culture, rules and regulations

Integrate curriculum resources

Muyuan establishes a curriculum resource centre that provides specific business cases, both internal and external, for case studies and practices.

Establish lecturer pool

Muyuan sets up a complete lecturer pool and formulates relevant management methods that require all management cadres to work as lecturers, cultivating better managers with tutelage from the best managers.

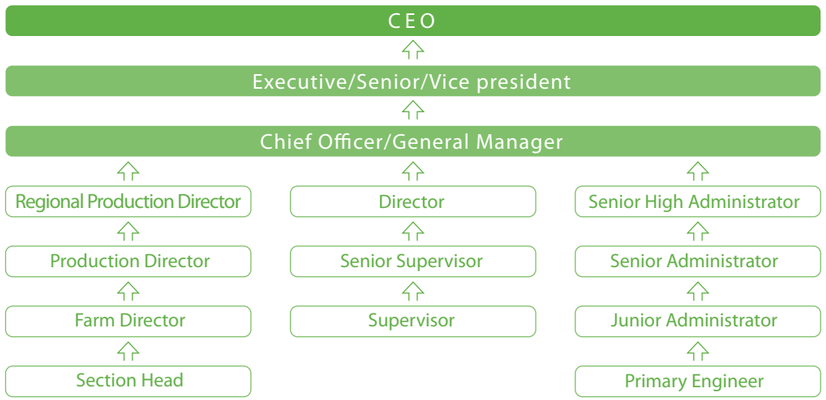
Promotion System

Muyuan has established a scientific promotion channel that provides clear career paths for employees. Muyuan also allows employees to adjust their promotion channels based on different development directions so to stimulate their maximum potential, achieving growth and development of both the Company and the employee.

Muyuan relates promotion channels to qualifications for each position and clarifies achievements and capabilities requirements for each level. We establish a qualification system for personnel promotion and inform employees of specific promotion requirements, to ensure that all employees have a clear understanding of qualifications required for each position and drive their development.

Adhering to the concept of "result-oriented", we establish a mechanism for employing people able to take a lower as well as a higher posts, to fully stimulate the vitality of the organisation. The Company follows the flexible leader allocation of "youth, technology, independence, tiered and rotation system", we cultivate well-rounded leaders and give opportunities for more young people to demonstrate themselves in order to support the development of the Company.

cninf 巨潮资讯 www.cninfo.com.cn



In 2019, Muyuan built a staff-position portrait system that assesses the position portraits and staff from achievements, capabilities, specialism, intelligence and habits, supporting the accurate selection of talent as well as smart and precise empowerment, and enhancing the competence of talents selected.

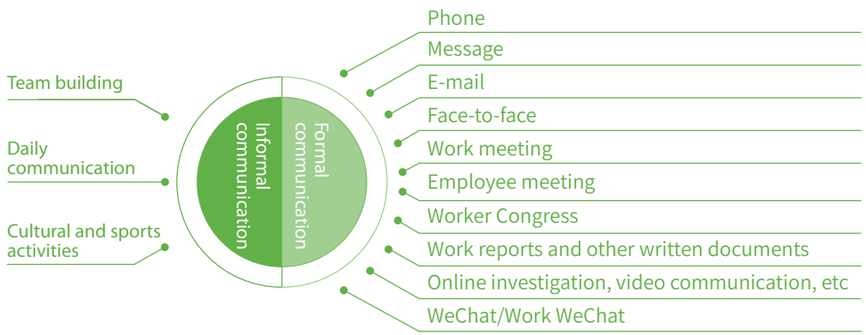
Position portrait ⇨ Certification and assessment ⇨ Calculation of staff-position matching degree ⇨ Candidate recommendation ⇨ Selection and appointment

Enjoying Abundant Life

Strengthening Employee Communication

Muyuan takes initiatives to cultivate a sense of ownership among employees, guides employees to be involved in the development of the Company and creates an all-round communication channel for employees. Employees can provide feedback and suggestions to the management and departments by means of communication, appeals, workers congress, etc. The Company will follow up and implements reasonable opinions or suggestions by employees.

Muyuan has formulated the system of workers congress, where employee representatives can participate in operation and management related decision-making, review and discusses issues such as the rewards and punishment policies, labour protection, and important rules and regulations affecting tangible benefits of employees.



Promoting Muyuan Culture

Adhering to the concept of "cultivating employees with culture and enabling employees to achieve in work", Muyuan makes continuous efforts to improve the Company's cultural system and organises various employee cultural activities with Muyuan characteristics, integrating Muyuan culture into employees' daily work.

Corporate culture and management training -- let every employee growth and change



Muyuan is willing to provide fertile soil for every dream and blue sky for every ambition. Since 2008, Muyuan has held 11 sessions of corporate culture and management training. During the corporate culture training every year, from the headquarters to the subsidiaries, from the feed plant to the farm, all employees, on the basis of ensuring daily production and operation, participated in the training and gained growth.

In 2019, Muyuan recruited more than 1000 graduates from more than 100 colleges and universities in 14 provinces. From July 13 2019, Chairman Qin Yinglin, Executive Vice President Cao Zhinian and the Muyuan's senior management team trained and empowered those new employees, and carried out a 76-day training, including military training, corporate culture training, department business practice training and management ability enhancement training; those trainings enabled those new employees to shift their roles from a student to an employee, and to improve their comprehensive ability.

"Seize every minute and great achievements can be made in the vast world", all employees in Muyuan learn and grow through the corporate culture training, accumulating energy to better apply their talents on the job and further to better realize their dreams and create value!

Pig Breeding Festival - a cultural event for Muyuan people



22 June is Muyuan's special festival, the Pig Breeding Festival. On this day, Muyuan held the Pig Breeding Festival & Award Ceremony that inherits the corporate spirit of "value, sharing and dedication", and select outstanding staff.

In 2019, the Pig Breeding Festival was held under the theme of "cross-border transformation and breakthrough to open a new chapter with unmanned operation" . We handed out three awards in innovative R&D, performance achievements, and outstanding contribution for the control of ASF, offering prize nearly 20 million in total.

Masters teach apprentices to pass on the flame from generation to generation - Muyuan Apprenticeship Ceremony



"Let successors stand on my shoulders to achieve success in their lives!"

Muyuan organises the Apprenticeship Ceremony every year around Teachers' Day to pass on the apprenticeship culture of Muyuan and carry forward the values of "daring to take responsibilities and giving back with gratitude".

On 9 September 2019, Muyuan held a grand event for the 11th Apprenticeship Ceremony under the theme of "making cross-border growth to realise great development, and passing on the flame to achieve a lasting business" . Our senior management, representatives of outstanding masters and apprentices and new employees recruited in 2019 attended this ceremony. Since the first Apprenticeship Ceremony in 2009, the number of masters and apprentices reached 14,000 and 28,000 respectively.

Mother-Child Project - making every family happy



Mother-Child Project is a platform constructed by Muyuan for employees and their children to communicate, learn and develop. Muyuan always adheres to its original purpose of "making every family happy" and organises various summer classes, summer camps, mother-child project meetings, etc. to participate in the growth of every Muyuan child.

In August 2019, Muyuan held the 28th Mother-Child Project Meeting under the theme "it is time for young people to make a dream and set sailing" , which aimed to help every child grow up healthily and happily. At this meeting, a total of 37,000 books were distributed to the "second generation of Muyuan" .

In addition, Muyuan thoughtfully organises summer classes and hires experienced and outstanding teachers to provide free professional homework and special interest guidance for children; arranges summer camps on historical sites, humanities and technologies to train independent thinking and team working among the children through experiential activities and games.

cninf 巨潮资讯 www.cninfo.com.cn

Creating the Project of Happiness

Strictly following the Labour Contract Law of the People's Republic of China and related laws and regulations, Muyuan signs labour contracts with all employees and pays pension insurance, medical insurance, unemployment insurance, work injury insurance, maternity insurance, and housing provident fund for employees. At the same time, Muyuan continues to improve the employee welfare system, for which purpose, the Company has created the Project of Happiness that comprehensively promotes the "family culture of Muyuan" , in an effort to improve life quality of employees through "enjoying wealth" , "raising children" , "enjoying life" , "keeping health" , etc.

Enjoying wealth

Life in Muyuan:

Muyuan offers employees internal discounts to purchase houses via multiple high-quality housing projects including Elite Mansion and Tianlufu.

Muyuan Loan:

Muyuan offers "Muyuan Loan" , a safe, fast, low-interest rate and unsecured loan service to employees working in Muyuan for over one year to meet their funding needs and solve the financial problems that they may have.

Raising children

Muyuan works with several primary and secondary schools that are open to all children of employees, helping Muyuan's employees to get better education resources for their kids.

Enjoying life

Birthday blessings:

Muyuan organises group birthday parties on an irregular basis and sends birthday blessings to employees.

Warmth and sympathy:

Send cashes and gifts to employees in case of weddings and funerals, and give blessings and regards.

Keeping health

Protect health:

Muyuan provides physical examination services for employees.

Speciality catering:

Muyuan provides rationally selected, nutritious and reasonable price catering services at cost price. We set up a buffet restaurant offering a customised menu of "Muyuan Flavour" , where the staff can make an appointment for the chef to provide on-the-spot cooking and enjoy the delicious food.

Recreation and fitness:

Provide various recreational and sports facilities encouraging employees to balance their work and life; set up supermarket, dry cleaner, hairdresser, medical room, gym, swimming pool, etc. to satisfy employees' living needs.









The e-commerce platform "Ju' ai Youxuan", which is beyond the Scope of the Report, is the main medium for Muyuan to provide high-quality products and services for its employees. The specific practices beyond the Scope of the Report are explained as follows.

Ju'ai Youxuan - providing quality products to employees

Through the e-commerce platform "Ju' ai Youxuan", Muyuan provides a full range of quality products and services covering "cloth, food, house, transportation, consumption, entertainment and wealth" .

In 2019, Muyuan integrated resources from various channels, and selected over 4,000 products under the categories of rice & noodles, imported beauty & personal care, electrical appliances, automobile group purchase, maternity & child, and local specialities to launch on the platform. At the same time, it also provided many warm services to staff, such as vehicle insurance processing, health examination, parent-child travel, livelihood materials support, and holiday benefits.



Outlook

Looking forwards, Muyuan, amid a market environment where challenges and opportunities coexist, will stick to the development principle of "green, focused, innovation, win-win-results" , and uphold the development concept of "creating value, serving society" to realise the Company's grand goals. Muyuan is playing a more important role in the economy, society and environment while realising healthy and sustainable development, working with people to create a better life.

Food Safety:

We will continue to take the advantage of the "large-scale and integrated" model and extend businesses to include pig slaughter and meat products processing while comprehensively upgrading the quality and safety management system and expanding the scale of pig breeding, so to achieve whole-process control and guarantee the safety of pork food. We will further speed up technological R&D and innovation to upgrade the smart pig breeding model, providing a number of innovative practices for the development of the breeding industry.

Public Welfare:

We will actively promote and replicate the "3+N" poverty alleviation model to help more people be relieved from poverty and become rich, and assist in the overall success in the fight against poverty. We will integrate industrial development with local economic and social development and keep most of the value created at local places to drive regional economic development and employment. We will intensify input to sectors relating to people's livelihoods, such as education and infrastructure construction and provide public welfare support by organising activities to help and care for vulnerable groups .

Environmental Protection:

We will improve the environmental management system, deeply implement the "five steps of environmental protection" , continuously innovate environmental protection technologies, raise environmental protection standards, and develop the circular economic model of "breeding-biogas manure-ecological agriculture" to reduce adverse impacts on the ecological environment.

Win-Win Cooperation:

We will further deepen the ecological construction of the industry, strengthen control on environmental and social risks in the industrial chain, and promote sustainable development of both upstream and downstream industries for mutual achievement.

Employee Care:

We will continue to improve the talent development system, attach importance to the cultivation of young talents, provide a broad career development platform for outstanding talents, actively safeguard employees' rights and interests, enhance employees' sense of gain and happiness, and share value and co-create with employees.

cninf 巨潮资讯 www.cninfo.com.cn

Muyuan Social Responsibility Index

Pillar	Muyuan Concerned Issues	Muyuan Performance	Section (s)
Economic	Financial performance	Total assets in 2019: 52.887 billion Revenue in 2019: 20.221 billion Net profit in 2019: 6.336 billion Pigs Sold in 2019: 10,253,300	Company Profile
	Corporate governance	The Board consolidates corporate governance Anti-corruption and Business Ethics	Corporate Governance
	Promoting local employment	Local employment rate: 84.86%	Introducing Talented People
	Industrial investment	Poverty alleviation industrial investment: 28.82 billion Realized employment in poor counties: more than 30,000 people	Topic 2: Further Promotion of Targeted Poverty Alleviation
Social	Compliant operation with integrity	Observe disciplines and laws Operation with integrity Compliant operation Conducted 5 sessions of integrity training with a total of 3,511 participants	Corporate Governance
	Ensuring food safety	Recurrent binary breeding system Pass rate for feed raw materials: 100% Implement FSSC 22000 management system, pass rate for sampling inspection on raw materials of feeds: 100% Pass GLOBAL GAP certification The whole process can be tested, verified and traced back Pass rate for sampling inspection on pig products: 100% Perfect harmless treatment system with zero outflow of sick and dead pigs	Guaranteeing Safety and Quality
	Providing high-quality pork	Supplied pigs: 10,253,300 Supplied safe and wholesome pork: 656,000 tons, accounting for 1.55% of the national supplies Met 16.93 million people's demands for pork	Topic 3: Industrial Upgrading of ASF Prevention
	Safeguarding animal welfare	Good Pig Production Award 2019 Comprehensive protection of animal welfare, including physical welfare, health welfare, environmental welfare, behavioural welfare, mental welfare	Committing to Animal Welfare
	Facilitating poverty alleviation	Poverty alleviation model of "5+" asset-based income had helped about 140,000 registered poor households and 350,000 poor people in 49 counties (regions) in 12 provinces, bringing them 540 million income	Topic 2: Further Promotion of Targeted Poverty Alleviation
	Supporting community construction	Donated a total of 173,197,400 to public welfare during the reporting period that benefited 164,814 households and 426,233 people Accumulated capital contribution of 712 million to help impoverished areas to build roads and bridges, dig wells and connect water pipes, construct cultural square, improve teaching environment etc.	Supporting Community Construction
Social	Public welfare and charity	Continously engaged in "Ju'ai" education assistance programs, donated a total of 400 million that funded 18,225 university students and 169,586 primary and secondary school students and rewarded 14,377 outstanding teachers from 83 counties (regions) in 13 provinces Donated Muyuan shares with a market value of 900 million to Hangzhou Westlake Education Foundation Established a public welfare platform accessible to everyone to encourage and mobilize the broad participation of volunteers, and to create a public welfare ecology	Assisting in Education by Ju'ai Project Supporting Community Construction
	Occupational health and safety	Full coverage of production safety management mechanism	Guaranteeing Health and Safety
	Caring for and respecting employees	Comprehensive and sound employee welfare system; Family culture and employee care	Innovating Incentives Enjoying an Abundant Life
	Protection of employees' rights and interests	On-time payment of employee payroll social insurance payment rate: 100% Labor contract signing rate: 100% Labor union participation rate: 100% Improve communication mechanism and guarantee democratic rights	Innovating Incentives Enjoying an Abundant Life
	Employee training and development	Sound training system: value training + management training + business training Established a scientific promotion channel, perfected the promotion mechanism	Supporting Employee Development
	Building a sustainable supply chain	Strict supplier management mechanism Suppliers that signed formal contracts: 100% Proportion of electronic procurement: 100% Rate of signing environmental protection agreements: 100% Rate of signing integrity agreements: 100% Promoted the development of industrial chain partners	Strengthening Supplier Management Delivering Sustainable Value
	Scientific and technological innovation	R&D investment: 112 million R&D talents: 786 A total of 156 utility model patents, 1 design patent and 25 invention patents Created three-prevention pig farms, leading industry upgrading Applied artificial intelligence, realizing cross-border transformation and breakthrough	Topic 4: Technology Innovation Leading the Upgrade
	Epidemic prevention	Biosafety management system, scientific epidemic prevention and supply guarantee Equipment innovation, three-prevention pig farms, leading industry upgrading Joint prevention and control to fight against epidemic	Topic 3: Industrial Upgrading of ASF Prevention
	Customer services and protection of rights and interests	CRM system, full process services Perfecting the customer feedback system Strict privacy protection mechanism	Enhancing Customer Experience

cninf 巨潮资讯 www.cninfo.com.cn

Pillar	Muyuan Concerned Issues	Muyuan Performance	Section (s)
Environment	Construction of environmental protection system	Environmental management mechanism Information-based environmental management platform Green culture, green office and garbage classification	Innovative Environmental Management Concept
	Energy conservation	Air consumption per hour: 65 m^3/pig Clean production management system; Energy-saving technology and technological innovation	Building Circular Economy
	Water resources management	Freshwater consumption: 1.6m^3/pig on the market	Building Circular Economy
	Emissions reduction	High standard of odour control Greenhouse gas emission 0.55 kg CO_2e/kg live-weight, 20% drop, leading the industry Zero discharge of wastewater, application of biogas slurry to fields, zero discharge of COD and ammonia nitrogen (in wastewater) among farms Comprehensive utilization of solid waste	Building Circular Economy
	Biodiversity and land use	High standard and strict requirements in site selection Improved the soil, harnessed 12,900 mu of desert, improve 27,400 mu saline alkali land, soil organic matter increased by 33.28%, fertilizer application decreased by 18.12kg per mu, production increased by 90.8kg per mu Land occupation: 2.3 m^2/pig, land utilization rate increased by 23%	Building Circular Economy
	Ecological circular economy	In 2019, the length of pipelines for returning Muyuan's biogas slurry to fields reached 4.96 million meters, and the area of fields irrigated by biogas slurry was 960,000 mu, with fertiliser applied to per mu of farmland decreased by 17% on average 2,194 rounds of agricultural and technical services were provided to a total of 90,705 farmers from 355 villages	Building Circular Economy

GRI Standards Index

GRI Standards	Disclosure Title	Section(s)
Organizational profile	102-1 Name of the 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	Company Profile Introducing Talented People
	102-9 Supply chain	Strengthening Supplier Management
	102-10 Significant changes to the organization and its supply chain	Refer to Annual Report
	102-11 Precautionary Principle or approach	Social Responsibility Strategy
	102-12 External initiatives	/
	102-13 Membership of associations	/
Strategy	102-14 Statement from senior decision-maker	Chairman's Statement
	102-15 Key impacts, risks, and opportunities	Chairman's Statement
Ethics and integrity	102-16 Values, principles, standards, and norms of behaviour	Company Profile Corporate Governance
	102-17 Mechanisms for advice and concerns about ethics	Corporate Governance
Governance	102-18 Governance structure	Corporate Governance Social Responsibility Management Framework
	102-19 Delegating authority	/
	102-20 Executive-level responsibility for economic, environmental, and social topics	Social Responsibility Management Framework
	102-21 Consulting stakeholders on economic, environmental and social topics	Stakeholder Communication
	102-22 Composition of the highest governance body and its committees	Corporate Governance
	102-23 Chair of the highest governance body	/
	102-24 Nominating and selecting the highest governance body	Refer to Annual Report
	102-25 Conflicts of interest	Refer to Annual Report
	102-26 Role of highest governance body in setting purpose, values, and strategy	Social Responsibility Management Framework
	102-27 Collective knowledge of highest governance body	Social Responsibility Management Framework
	102-28 Evaluating the highest governance body's performance	Refer to Annual Report

cninf 巨潮资讯 www.cninfo.com.cn

GRI Standards	Disclosure Title	Section(s)
Governance	102-29 Identifying and managing economic, environmental, and social impacts	Social Responsibility Management Framework
	102-30 Effectiveness of risk management processes	Refer to Annual Report
	102-31 Review of economic, environmental, and social topics	Materiality Assessment
	102-32 Highest governance body's role in sustainability reporting	Social Responsibility Management Framework
	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	Stakeholder Communication
	102-41 Collective bargaining agreements	Enjoying Abundant Life
	102-42 Identifying and selecting stakeholders	Stakeholder Communication
	102-43 Approach to stakeholder engagement	Stakeholder Communication
	102-44 Key topics and concerns raised	Stakeholder Communication
Reporting practice	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	Materiality Assessment
	102-48 Restatements of information	No significant change
	102-49 Changes in reporting	About the Report Materiality Assessment
	102-50 Reporting period	About the Report
	102-51 Date of most recent report	/
	102-52 Reporting cycle	About the Report
	102-53 Contact point for questions regarding the report	Stakeholders Feedback Form
	102-54 Claims of reporting in accordance with the GRI Standards	About the Report
	102-55 GRI content index	GRI Standards Index
	102-56 External assurance	/
Management Approach	103-1 Explanation of the material topic and its Boundary	Stakeholder Communication
	103-2 The management approach and its components	Social Responsibility Strategy Stakeholder Communication
	103-3 Evaluation of the management approach	Stakeholder Communication

GRI Standards	Disclosure Title	Section(s)
GRI 201: Economic Performance	201-1 Direct economic value generated and distributed	Company Profile
	201-2 Financial implications and other risks and opportunities due to climate change	Circular Economy, Realising Sustainable Development
	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	Further Promotion of Targeted Poverty Alleviation Supporting Community Construction
	203-2 Significant indirect economic impacts	Further Promotion of Targeted Poverty Alleviation Industrial Upgrading of ASF Prevention Technology Innovation Leading the Upgrade Delivering Sustainable Value Muyuan Ju'ai, Supporting Public Welfare
GRI 204: Procurement Practices	204-1 Proportion of spending on local suppliers	Strengthening Supplier Management
GRI 205: Anti-corruption	205-1 Operations assessed for risks related to corruption	Corporate Governance
	205-2 Communication and training about anti-corruption policies and procedures	Corporate Governance
	205-3 Confirmed incidents of corruption and actions taken	Corporate Governance
GRI 206: Anti-competitive Behaviour	206-1 Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	/
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	Not applicable
GRI 302: Energy	302-1 Energy consumption within the organization	Building Circular Economy
	302-2 Energy consumption outside of the organization	/
	302-3 Energy intensity	Building Circular Economy
	302-4 Reduction of energy consumption	Building Circular Economy
	302-5 Reductions in energy requirements of products and services	Building Circular Economy

cninf 巨潮资讯 www.cninfo.com.cn

GRI Standards	Disclosure Title	Section(s)
GRI 303: Water	303-1 Water withdrawal by source	Building Circular Economy
	303-2 Water sources significantly affected by withdrawal of water	No such water resource
	303-3 Water recycled and reused	Building Circular Economy
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	Building Circular Economy
	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	/
	305-2 Energy indirect (Scope 2) GHG emissions	/
	305-3 Other indirect (Scope 3) GHG emissions	/
	305-4 GHG emissions intensity	/
	305-5 Reduction of GHG emissions	/
	305-6 Emissions of ozone-depleting substances (ODS)	/
	305-7 Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	/
GRI 306: Effluents and Waste	306-1 Water discharge by quality and destination	Building Circular Economy
	306-2 Waste by type and disposal method	Building Circular Economy
	306-3 Significant spills	No such matter occurs
	306-4 Transport of hazardous waste	/
	306-5 Water bodies affected by water discharges and/or runoff	No such water body
GRI 307: Environmental Compliance	307-1 Non-compliance with environmental laws and regulations	No incidents of non-compliance
GRI 308: Supplier Environmental Assessment	308-1 New suppliers that were screened using environmental criteria	Delivering Sustainable Value
	308-2 Negative environmental impacts in the supply chain and actions taken	Delivering Sustainable Value
GRI 401: Employment	401-1 New employee hires and employee turnover	/
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Innovating Incentives Enjoying an Abundant Life
	401-3 Parental leave	/
GRI 402: Labour/Management Relations	402-1 Minimum notice periods regarding operational changes	Strictly Following Related National and Local Laws and Regulations

GRI Standards	Disclosure Title	Section(s)
GRI 403: Occupational Health and Safety	403-1 Workers representation in formal joint management–worker health and safety committees	/
	403-2 Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	/
	403-3 Workers with high incidence or high risk of diseases related to their occupation	Not applicable
	403-4 Health and safety topics covered in formal agreements with trade unions	/
GRI 404: Training and Education	404-1 Average hours of training per year per employee	/
	404-2 Programs for upgrading employee skills and transition assistance programs	Supporting Employee Development
	404-3 Percentage of employees receiving regular performance and career development reviews	/
GRI 405: Diversity and Equal Opportunity	405-1 Diversity of governance bodies and employees	Introducing Talented People
	405-2 Ratio of basic salary and remuneration of women to men	/
GRI 406: Non-discrimination	406-1 Incidents of discrimination and corrective actions taken	Introducing Talented People
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 Labour	408-1 Operations and suppliers at significant risk for incidents of child labour	Introducing Talented People
GRI 409: Forced or Compulsory Labour	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labour	Introducing Talented People
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

cninf 巨潮资讯 www.cninfo.com.cn

GRI Standards	Disclosure Title	Section(s)
GRI 413: Local Communities	413-1 Operations with local community engagement, impact assessments, and development programs	Further Promotion of Targeted Poverty Alleviation Building Circular Economy Supporting Community Construction
	413-2 Operations with significant actual and potential negative Impacts on local communities	No such operation
GRI 414: Supplier Social Assessment	414-1 New suppliers that were screened using social criteria	Delivering Sustainable Value
	414-2 Negative social impacts in the supply chain and actions taken	Delivering Sustainable Value
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	Food Safety First, Providing High Quality Pork
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	No incidents of non-compliance
GRI 417: Marketing and Labelling	417-1 Requirements for product and service information and labelling	Not applicable
	417-2 Incidents of non-compliance concerning product and service information and labelling	Not applicable
	417-3 Incidents of non-compliance concerning marketing communications	No incidents of non-compliance
GRI 418: Customer Privacy	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	Enhancing Customer Experience
GRI 419: Socioeconomic Compliance	419-1 Non-compliance with laws and regulations in the social and economic area	No incidents of non-compliance

CASS-CSR 4.0 Index

Level 1 Title	Level 2 Title	CASS-CSR 4.0
About the Report		P1.1、P1.2 、P1.3、P4.4
Chairman's Statement		P2.1、P2.2、P3.1、P3.2
About Muyuan	Company Profile	P4.1、P4.2、P4.3、G1.1、G1.2、M1.6、M1.7、M2.5
	Corporate Governance	M1.1、M1.2、M1.3、M1.4、M1.5、M3.1、S1.2
Responsibility Management	Social Responsibility Strategy	G2.1、G2.2、G2.3
	Social Responsibility Management Framework	G3.1、G3.2、G3.3、G4.2、G4.3
	Materiality Assessment	G2.1
	Stakeholder Communication	G6.1、G6.2
Topic 1: Contributing to COVID-19 Control		P3.1、P3.2、S4.8
Topic 2: Further Promotion of Targeted Poverty Alleviation		P3.1、P3.2、S4.4、S4.5、S4.9、S4.12、S4.13、S4.14
Topic 3: Industrial Upgrading of ASF Prevention		P3.1、P3.2、M2.1、M2.2、M3.6
Topic 4: Technology Innovation, Leading the Upgrade		M2.4、M2.5、M2.6、M2.7、M3.6
Food Safety First, Providing High Quality Pork	Guaranteeing Safety and Quality	M2.1、M2.2、M2.3、M2.4、M2.7、M3.4、M3.6
	Committing to Animal Welfare	M2 .9
Circular Economy, Realising Sustainable Development	Innovative Environmental Management Concept	E1.1、E1.3、E1.5、E3.1、E3.6
	Building Circular Economy	E1.4、E1.7、E1.9 、E2.1、E2.2、E2.3、E2.4、E2.5、E2.7、E2.8、E2.9、E2.11、E2.12、E2.14、E2.15、E2.16、E2.17、E2.18、E2.19、E2.24、E3.3、E3.4
Work Together, Sharing the Value of the Industrial Chain	Strengthening Supplier Management	M3.1、M3.3、M3.7 、M3.12、M2.15、S4.4
	Delivering Sustainable Value	M3.8、M3.10、M3.11、M3.14、M3.15、E1.6
	Co-constructing Industrial Chain Ecology	M3.4、M3.6、S1.5
	Enhancing Customer Experience	M2.11、M2.13、M2.14、M2.15
Muyuan Ju'ai, Supporting Public Welfare	Assisting in Education by the Ju'ai Project	S4.6、S4.7、S4.8、S4.9、S4.10、S4.13
	Supporting Community Construction	S4.5

cninf 巨潮资讯 www.cninfo.com.cn

Level 1 Title	Level 2 Title	CASS-CSR 4.0
People-Oriented, Contributing to Their Happiness	Introducing Talented People	M3.4、S1.5、S1.6、S2.1、S2.2、S2.5、S2.7、S2.8、S4.2、S4.3
	Guaranteeing Health and Safety	S2.11、S2.12、S3.1、S3.2、S3.3、S3.4
	Innovating Incentives	S2.10
	Supporting Employee Development	S2.14、S2.16
	Enjoying Abundant Life	S2.4、S2.10、S2.17
Outlook		A1
Muyuan Social Responsibility Index		A2
GRI Standards Index		A5
CASS-CSR 4.0 Index		A5
Stakeholders Feedback Form		A6

Stakeholders Feedback Form

Thank you for reading "Muyuan Food Co., Ltd. Sustainability Report 2019". In order to provide more valuable information to the Company's stakeholders and improve its ability to fulfilling social responsibilities, Muyuan would welcome any feedback or suggestions you might have about the Report.

1.Do you think this report provides the information you want to know?

☐ Yes ☐Neutral ☐ No

2. Do you think this report comprehensively reflects the Company's economic, social and environmental performance?

☐ Yes ☐Neutral ☐ No

3. Do you think this report can fully respond to the expectations and demands of the Company's stakeholders?

☐ Yes ☐Neutral ☐ No

4. Do you think the quantitative information disclosed in this report is objective, fair and effective?

☐ Yes ☐Neutral ☐ No

5. Do you think this report is coherent and easy to understand?

☐ Yes ☐Neutral ☐ No

6. Do you think the layout design of this report helps you understand the relevant information?

☐ Yes ☐Neutral ☐ No

7. Please feel free to share any additional comments, suggestions, or feedback below.

cninf 巨潮资讯 www.cninfo.com.cn