



中地乳业
ZhongDi Dairy



2018

**ENVIRONMENTAL,
SOCIAL AND
GOVERNANCE REPORT**

中國中地乳業控股有限公司
China ZhongDi Dairy Holdings Company Limited

(a company incorporated under the laws of the Cayman Islands with limited liability)

Stock code: 1492





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About the Report

This Environmental, Social and Governance Report (the “**ESG Report**”) is the third ESG report published by China ZhongDi Dairy Holdings Company Limited (the “**Company**”) and its subsidiaries (collectively referred to as the “**Group**” or “**We**”). The ESG Report mainly covers the annual performance of the Group’s environmental, social and other aspects in 2018. The ESG Report shall be read with reference to the “Corporate Governance Report” of *China ZhongDi Dairy Holdings Company Limited Annual Report 2018* (“**2018 Annual Report**”), to have a more comprehensive overview on the environmental, social and governance (“**ESG**”) performance of the Group.

Reporting Organizational Scope

Unless otherwise stated, the organizational scope of the ESG Report covers the Company and its major subsidiaries, which include eight dairy farms: Beijing ZhongDi Farm, Inner Mongolia ZhongDi Farm, Helan ZhongDi Farm, Ningxia ZhongDi Farm, Kuandian ZhongDi Farm, Langfang ZhongDi Farm, Tianzhen ZhongDi Farm and Tianjin ZhongDi Farm. All information disclosed in the ESG Report has been sourced from the Group’s documents and statistical reports, and the monetary amounts involved are denominated in Renminbi (“**RMB**”).

Reporting Period

The ESG Report’s reporting period is consistent with the 2018 Annual Report of the Group, which is 1 January 2018 to 31 December 2018 (the “**Reporting Period**”). Where necessary, some content goes beyond the aforesaid period so as to enhance the comparability of the ESG Report.

Reporting Guideline

The ESG Report was prepared in accordance with the Appendix 27 *Environmental, Social and Governance Reporting Guide* (“**ESG Reporting Guide**”) to the *Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited* (the “**Listing Rules**”) issued by The Stock Exchange of Hong Kong Limited (“**SEHK**”). Moreover, the disclosed contents have been scoped and determined based on the principles of materiality, quantitative, balance and consistency, and is compliant with the “comply or explain” provisions set out in the *ESG Reporting Guide* issued by SEHK.

Access to the Report

The ESG Report is published in two languages - Traditional Chinese and English. If there is any inconsistency between the two versions, the Traditional Chinese version shall prevail. You are welcome to obtain the Traditional Chinese and English versions of the ESG Report in a PDF format from the website of the Company, www.zhongdidairy.hk, and the website of SEHK, www.hkexnews.hk.

Comments and Feedbacks

Thank you for reading the ESG Report. Your comments and suggestions are motivations for the Group to keep enhancing its sustainability works and reporting quality. If you have any comments or feedback, you are welcome to contact us by email at ir@zhongdidairy.hk.

Statement of the Chairman

In 2018, in view of the complicated and changing macroeconomic landscape, the Group adhered to the ultimate goal of “Establishing Sustainable and Ecological Dairy Farms”, developed the spirit of “Pragmatic, Innovative, Precise and Efficient” and applied the guidelines of “Precise Management, Quality Enhancement and Efficiency Improvement”. Therefore, the Group strives to create environmentally friendly and green ecological dairy farms which are sustainable, and to enhance the sustainability of the industry by carrying out numerous arduous and meticulous tasks in propagation and breeding, scientific feeding, environmental improvement, epidemic prevention, quality and safety, cost control, market development and other aspects.

Product safety and quality – the Group has comprehensively improved farm management by implementing stringent and comprehensive farm management systems and disease control systems to maintain the health of the entire herd. In view of a series of key quality indicators, the Group’s raw milk is of a premium and stable quality and all its indicators outperform the standards in Europe and Japan. The Group has gained various recognitions from the industry due to its advanced management and premium product quality. The Group strives to become the market leader in raw milk production industry in China, and promotes the synergistic development of relevant upstream and downstream businesses in the dairy product industry’s supply chain.

Environment – the Group strives to create sustainable and ecological farms. The business of the Group’s dairy farms is subject to the stringent environmental laws and regulations of the People’s Republic of China (“**PRC**”) . Therefore, we constantly focus on strictly controlling emissions, saving energy and reducing emissions to protect the ecological environment. The Group has further enhanced the implementation of its operating model of integrating agriculture with animal husbandry and integrating plantation with animal farming, to proactively respond to the green and low-carbon circular development, and to contribute to “Accelerating the Reform of Ecological Civilization System and Building a Beautiful China”.

Talent management and social responsibility – while continuously moving forward, the Group attaches great importance to capacity building of human resources and perform our due obligation and duty to the society. The Group has provided employees with a healthy and safe workplace and built an efficient, uniting and competitive team to promote the Group’s sustainable development; proactively held training activities and employee activities to continuously improve employees’ professional and technical skills and their comprehensive capabilities, and to enrich their life; provided assistance and support to the surrounding communities and fulfilled social responsibility by considerably giving back to the society; proactively participated in the dairy industry’s activities.

Chairman

Zhang Jianshe





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ZhongDi Dairy

01

About Us

1. About Us

The Group is a modern agricultural and animal husbandry enterprise mainly engaged in dairy farming in the PRC. Our business models cover multiple stages of the dairy farming industry value chains, including raising dairy cows, breeding dairy cows, premium raw milk production and sale, importing and selling dairy cows of quality breeds and breeding stock, as well as import trading business in alfalfa hay and other animal husbandry-related products. All farms operated by us are distributed over the areas suitable for dairy farming as specified in the *Development Plan of Major Dairy Cow Farming Regions (2008-2015)* (《全國奶牛優勢區域佈局規劃(2008-2015年)》) promulgated by the Ministry of Agriculture and Rural Affairs of the PRC in 2009. Moreover, our farms are close to raw milk processing plants of leading dairy companies in China. We continuously provide premium raw milk to customers depending on the ideal geographical locations, climate and environment of our operating farms, the excellent genetic characteristics of herds and excellent breeding technology, the balanced and nutritious feed formulation and modern farming method, the modern milking system and the comprehensive and strict disease control system.

At present, the Group is a National Flagship Enterprise for Industrialization of Agriculture accredited by the Ministry of Agriculture and Rural Affairs of the PRC. We intend to continue expanding our operation scale and producing premium and safe raw milk through the scientific operation of modern large-scale farms, maintain and expand our competitive edge in the high-end premium raw milk supply end, and ultimately become one of the largest dairy farming companies in China.

Relaying on the advanced management and premium product quality, the Group's comprehensive strength has gained recognition from the industry. The subsidiaries of the Group successively obtained the titles of "Advanced Enterprise of Animal Husbandry in China" awarded by the Animal Husbandry Association of China and "Backbone Enterprise in the Dairy Industry" awarded by the Dairy Association of China for being an outstanding dairy product processing enterprise, and became the sole raw milk production enterprise selected as a member of the second D20 Enterprise Alliance of China's Dairy Industry. Mr. Zhang Jianshe, the Company's Chairman, was titled a "Meritorious Executive" and Mr. Zhang Kaizhan, the Company's executive director, was titled a "Talent with Exceptional Contribution" in 2018. These honorary titles were granted by the Dairy Association of China in recognition of their remarkable commitment to the dairy industry.



ZhongDi Farm Technology Corporation obtained the titles of "Advanced Enterprise of Animal Husbandry in China" awarded by the Animal Husbandry Association of China



The Group obtained the title of "Backbone Enterprise in the Dairy Industry" awarded by the Dairy Association of China for being an outstanding dairy product processing enterprise



Mr. Zhang Kaizhan, the Company's executive director, was titled an outstanding worker in the dairy industry in 2018 granted by the Dairy Association of China



Mr. Zhang Jianshe, the Company's Chairman, was titled an outstanding worker in the dairy industry in 2018 granted by the Dairy Association of China



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02

Sustainable Management

2.1 Responsible Management
2.2 Upholding Integrity and
Compliant Operations

2.3 Stakeholder Communication
2.4 Materiality Assessment



2.1 Responsible Management

The Group is committed to maintaining a high standard of corporate governance. Good corporate governance standards are essential for the Group to safeguard the interests of stakeholders, to enhance corporate value, and to formulate its business strategies and policies. The Group adopted the provisions as set out in the Corporate Governance Code (the “CG Code”) contained in Appendix 14 to the Listing Rules and has applied the principles in the CG Code throughout the Reporting Period. The board of directors of the Company (the “Board of Directors”) is responsible for the leading and control of the Company, and is responsible for overseeing the Group’s businesses, strategic decisions and performance. The Board of Directors is at the same time responsible for promoting our sustainable development by directing and supervising our affairs.

As the market gradually transits to a low-carbon economy, it may entail extensive changes in policy, legal and other aspects that pose different levels of risks to corporates, including climate-related risks and triggered financial risks. Under these circumstances, the Group proactively responds to ESG risks. The Board of Directors has integrated ESG matters into the Group’s development strategy by considering the Group’s recent financial performance and its profitability whilst paying attention to the protection of the involved natural, human and social resources in its future development. By maintaining good communication with stakeholders, the Group minimizes the costs and risks in sustainable development, creates more potential corporate benefits and creates long-term value for shareholders. Meanwhile, the Board of Directors is responsible for evaluating and determining ESG risks and ensures that appropriate and effective ESG risk management and internal control systems are in place, and is responsible for the Group’s ESG strategy and reporting. The Group arranges senior management to interview major business directors for risk assessment and to identify major risks followed by reporting and inspection. In terms of daily risk control, the Group has adopted a bottom-up method involving all major business units to identify operational risk¹ in daily business.

The Group has conducted ESG-related works in accordance with the requirements of the *ESG Reporting Guide* issued by the SEHK. In order to implement ESG works and its management effectively and systematically, the Group has built an ESG management system involving multiple levels of participation with a clear division of responsibilities, which is formed by the Company’s senior management, each functional department and each farm. Meanwhile, we have established an effective ESG information management system and invited an external consultant to provide suggestions.

¹ For details of the Group’s risk management and internal control system, please refer to the “Corporate Governance Report” section in the 2018 Annual Report.

2.2 Upholding Integrity and Compliant Operations

The Group strictly abides by the relevant laws and regulations relating to bribery, extortion, fraud and money laundering, including but not limited to the *Criminal Law of the PRC*, the *Regulations of the PRC for Suppression of Corruption*, the *Anti-money Laundering Law of the PRC*, the Listing Rules, the industrial regulations and rules. We have formulated the *Measures for the Internal Auditing of China ZhongDi Dairy Holdings Company Limited* and the *Measures for the Administration of Anti-fraud and Reports* to enhance our corporate governance and internal control, to ensure our sustainable, steady and healthy development as well as to monitor corruption, bribery or other misbehaviors that our employees might have. Moreover, a permanent anti-fraud establishment as well as anti-fraud assessment and control procedures and mechanism have all been set up. Our permanent anti-fraud establishment is responsible for anti-fraud related works, for organizing and conducting fraud risk assessments. It receives reports about misbehaviors related to bribery, extortion, fraud and money laundering, etc. and conducts investigations for the received cases and provides advice. Apart from this, our senior managers set themselves as examples in being upright and honest, and advocating the spirit of being upright in the Group through multiple ways (such as the employee handbook and company website). A company culture with honesty and integrity is what we advocate. We spare no efforts to proactively create a company with integrity. During the Reporting Period, the Group did not violate any aforementioned laws and regulations relating to bribery, extortion, fraud and money laundering.

We attach great value on information security, and strictly abide by relevant laws, regulations, privacy policies, and relevant protection and confidentiality arrangements, including but not limited to the *Law of the PRC on Protection of Consumer Rights and Interests*, when collecting and keeping information of customers, employees and partners. We strive to keep the information safe and prevent it from being read, handled, deleted or used without authorization. In addition, our employees are required to enter into non-disclosure agreements in undertaking shared responsibilities to safeguard the confidential information of products and customers. Moreover, our business partners are required to maintain the confidentiality of all sensitive information related to our operation, technologies or business plans.

If there are breaches of relevant privacy statements and confidentiality provisions, relevant liability shall be pursued in accordance with non-disclosure agreements.



2.3 Stakeholder Communication

It is an essential part of the Group’s sustainable development to communicate with stakeholders. The Group maintains good communication with each stakeholder proactively, gathering stakeholders’ expectations and comments regarding the Group’s ESG performance in a timely manner, so as to formulate specific working plans in a better way and respond to these expectations through organizing and undertaking actions. In addition, we take these expectations as a reference to formulate our future sustainability management directions.

Stakeholders	Expectations	Communications channels	Frequency	Responses
 Shareholders and investors	<ul style="list-style-type: none">•Return on investments•Corporate governance•Preventing operational risks•Developing the market	<ul style="list-style-type: none">•General Meetings•Publishing annual reports and ESG reports regularly•Result announcements•Roadshows	Annual/ quarterly/ irregular	<ul style="list-style-type: none">•Continuously enhancing corporate management and striving to become the market leader in the raw milk production industry in China•Maintaining regular communication and enhancing information disclosure
 Relevant government departments	<ul style="list-style-type: none">•Paying tax according to laws•Complying with laws and regulations relating to environment, quality, safety and other	<ul style="list-style-type: none">•Inspection and assessment•Company meetings with government•Work reports	Regular/ irregular	<ul style="list-style-type: none">•Paying tax according to laws•Implementing works complying with regulations and ensuring that operations comply with environmental protection, promoting the dairy industry's invigoration, quality and safety of dairy products and other requirements
 Dairy product companies	<ul style="list-style-type: none">•Products complying with relevant laws and regulations•Guaranteeing products' quality	<ul style="list-style-type: none">•Industrial seminars•Regular visits•Comprehensive feedback mechanisms	Regular/ irregular	<ul style="list-style-type: none">•Continuously enhancing product quality management and providing premium quality raw milk continuously and steadily•Fair competition and improving product quality•Proactively implementing products' research and development
 Employees	<ul style="list-style-type: none">•Salary and benefits•Health and safety•Promotion and development•Reasonable rest hours	<ul style="list-style-type: none">•Employee training•Online communication platforms•Employee activities	Regular/ irregular	<ul style="list-style-type: none">•Guaranteeing employees' rights and benefits•Providing occupational development opportunities•Enriching employee activities
 Suppliers	<ul style="list-style-type: none">•Fair and transparent procurement•Win-win cooperation	<ul style="list-style-type: none">•Tendering and bidding•Project cooperation•On-site visits	Regular/ irregular	<ul style="list-style-type: none">•Ensuring procurement is fair and transparent•Sharing information and resources•Developing together and ensuring quality
 Surrounding communities	<ul style="list-style-type: none">•Protection of the community environment•Offering supports to local economic development	<ul style="list-style-type: none">•Community communication•Charity donations	Regular/ irregular	<ul style="list-style-type: none">•Fulfilling social responsibility•Proactively supporting communities•Implementing environmental protection measures

2.4 Materiality Assessment

Based on the Group’s development direction and stakeholders’ expectation, the Group conducted a materiality assessment according to the “materiality” principle, and, therefore, we could report the major ESG performance of the Group during the Reporting Period and to respond to stakeholders’ expectations more specifically. With reference to SEHK guidelines and other sustainability reporting guidelines, the Group identified ESG topics of this year that should be reported by taking full consideration of the Group’s business nature and development strategy together with stakeholders’ focus points. After ESG topics were identified, they were verified and reviewed by us to determine the main topics and contents to be covered in the ESG Report.

The reviewed ESG topics are listed as follows. The ESG Report shows the ESG performance of the Group during the Reporting Period according to the topics and relevant reporting guidelines.

Aspects	ESG topics
 Environmental	Emissions management
	Use of resources
	Ecological protection
 Social	Employee rights and benefits
	Labor standards
	Quality and safety of milk
	Occupational health and safety
	Employee development and training
	Supply chain management
	Anti-corruption
	Community investment





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03

Improving Quality and Increasing Efficiency, Producing High-Quality Milk

3.1 Carefully Selecting and Breeding,
Outstanding Herds

3.2 Scientific Feeding, Sufficient Nutrition

3.3 Refined Management, Healthy Farms

3.4 Assuring Milk Quality at
Every Step

3.5 Effective Communication,
Customer First

3.1 Carefully Selecting and Breeding, Outstanding Herds

We carefully select and breed cows, and cultivate an excellent cow herd. We take pure-bred Holstein pedigrees as the foundation cows of our dairy farms. To ensure that the imported dairy cows comply with the national quarantine standards in the PRC, and to ensure that they are healthy, stringent quarantine and epidemic prevention measures have been implemented by the Group's experienced team. Moreover, our professional feeding teams patiently feed and take good care of the dairy cows during their quarantine to ensure that each of them is safe, comfortable and well-fed. To produce premium quality raw milk sustainably, we have stepped up our efforts in breeding dairy cows and breeding management, and have improved the quality and genetic characteristics of our dairy cows. Scientific researches in dairy cows are conducted by our professional team, and we have proactively invited local and international experts to provide technical advice to improve the genetic characteristics of dairy cows in a more effective and structured way, in order to continuously increase the quality of milk.

In 2018, the Group fully established a dairy cow breeding system and promoted the dairy cow breeding works by strategically cooperating with globally reputable breeding companies. Based on the Group's breeding strategies and targets, we analyzed dairy cows' genes and productivities through assessing their body shapes, appearances and other aspects, so as to formulate the ZhongDi breeding index and the dairy cow breeding plan for the next twelve years. Helan ZhongDi Farm of the Group was selected as the first batch of national key dairy cow breeding farm in November 2018, which signified that the Group's dairy cow breeding work had reached a new stage.

We are devoted to developing modern and elite farms, which are moderately scaled and meeting required technical standards. Moreover, the farms are developed sustainably, equipped with advanced facilities, with intelligent management, and are supported with resource recycling. We have applied standardized design, construction and management to each farm, which is tailored according to the local environment. Firstly, we have set up ventilated cow stalls and an in-stall feeding system for dairy cows to freely obtain food and water, move and lay down to rest. Moreover, individual cow stalls are provided to calves, heifers, milking cows, dry cows and cows that require special care. Additionally, waterproof and UV-proof roller shutters have been installed outside stalls; this may either facilitate ventilation or keep stalls warm. In addition, we have also installed fans and water spray systems in our operating farms to create a cool and comfortable environment during the summer, and we have developed an optimal and suitable lighting system according to the living habits of our dairy cows. During the Reporting Period, the farms of the Group improved the facilities in farms to further enhance their environment by building new cow stalls for dry cows, installing ventilation and cooling facilities, such as fans, spraying systems, etc., and other measures.



The Group's dairy farm

3.2 Scientific Feeding, Sufficient Nutrition

The high quality of dairy cows' feeds and the effectiveness of their feeding are of great significance to ensure the safety of the cows and milk. To ensure the quality and stable supply of feeds, we have built crop farms adjacent to farms or chosen croppers in the vicinity of farms to provide us feeds, such as corn, alfalfa, etc. We have conducted quality control over feeds. Each batch of feeds from all suppliers is sampled and regularly delivered to a third-party testing firm for a nutrition test. This helps us scientifically monitor the quality and safety of our feeds from the source. Moreover, feeding dairy cows with spoiled forages and feeds is strictly prohibited. During the Reporting Period, all crops that we planted were strictly subject to the *Agricultural Products Safety Law of the PRC*.



The alfalfa farm

The Group has continuously and proactively promoted dairy cows' precise feeding. We have adopted a modern feeding method, the total mixed rations ("TMR"), to satisfy the nutritional needs of dairy cows in a more effective way. Our dairy cows are divided into different groups according to their production performance and physiological stages to accurately make up feeds matching the distinctively nutritional needs of each group and adjust dairy cows' premix formula in a timely manner. Furthermore, we have conducted inspection, analysis and supervision over feeds on a regular basis to ensure that they satisfy cows' nutritional needs and comply with relevant safety requirements. In addition, we supervise and assess feed additions, servings and dietary raw feeds. Follow-up evaluations on the particle size of TMR, herd status, manure and other aspects are carried out to ensure that the feeding process is precise.



The feeding of dairy cows of the Group

Furthermore, we have adopted an information management system to our dairy cow's feeding, to ensure that each calf can obtain sufficient nutrition in a timely manner through the use of an automated calf feeding system. Our information center collects and analyzes dairy cows' daily feeding performance, managing the health of our cows in a digitalized manner and laying a solid foundation for making scientific feeding plans using the data.



The feeding of dairy cows of the Group

3.3 Refined Management, Healthy Farms



Kuandian ZhongDi Farm

The Group strictly complies with relevant laws and regulations applying to the husbandry industry that have significant impacts on the Group, including but not limited to the *Animal Husbandry Law of the PRC* (“**Animal Husbandry Law**”) and the *Law on Animal Epidemic Prevention of the PRC*. The Group has also formulated farm management measures, such as the *Management Measures of Quality and Safety of Milk*, to ensure cows’ health and safety by conducting standardized and efficient farm management. During the Reporting Period, the Group’s farms did not have any outbreaks of major diseases.

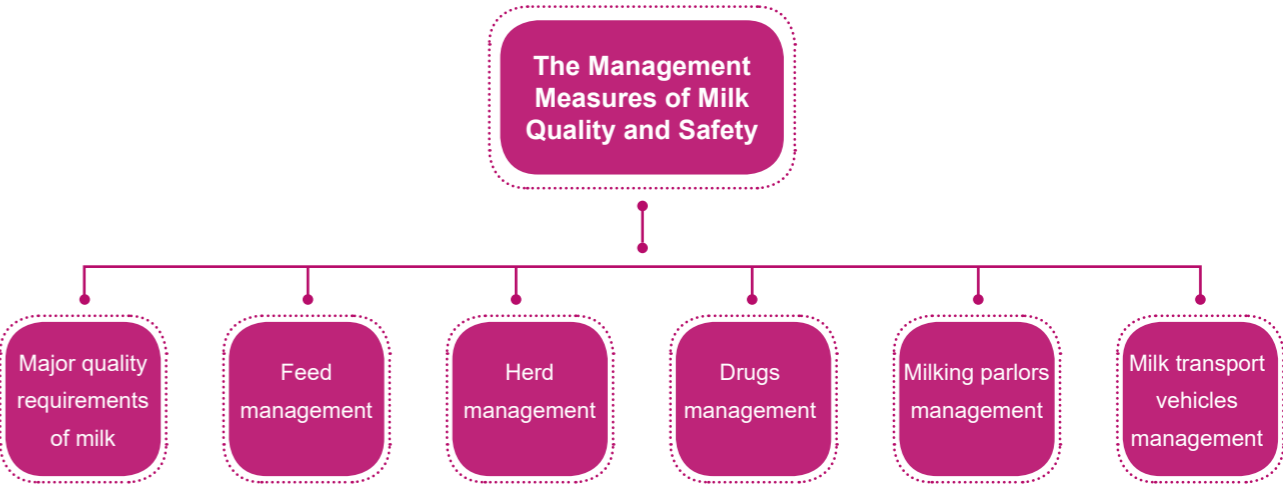
In 2018, the Group comprehensively strengthened its farm management, refined management and increased their quality and efficiency based on the “Higher Standards, Stricter Requirements, Stronger Enforcement and Higher Productivity” philosophy. The Group has enhanced the monitoring of feeds quality and dairy cows’ health status and no effort is spared to elevate dairy farms’ operation efficiency. An information management system is applied to our farms to better understand the living condition of the dairy cows and continuously improve herd management. All farms adopt DairyComp 305, a data management system, to implement information management, including dairy cows’ record, breeding, disease, production and other management. Dairy cows’ basic information, production information, and records of feeding, disease and treatment and breeding are collected and analyzed effectively by the information data centers of our farms by using the DairyComp 305 system to manage each dairy farm more precisely and provide a comfortable living environment for our dairy cows.

We have implemented strict and comprehensive disease control systems to maintain cows’ health. On-site professional veterinarians are employed to monitor dairy cows’ health by vaccinating them, and to keep track of dairy cow’s health at any time to decrease the risks of getting infectious diseases. In addition, we have further improved the biological safety prevention and monitor system mainly by adopting the following measures: compiling and simplifying the veterinary drug menu and strengthening the control of using veterinary drugs; standardizing disease treatment plan; and standardizing and optimizing the vaccination procedure in dairy farms as well as improving disease inspection and identification. Furthermore, as for management of using veterinary drugs, we have established a complete and accurate documentation for treatment, monitoring and herd transfer. We have also strictly implemented the operating procedure of “Sampling-Chemical Test-Notifying Transfer of Qualified Herd-Verification of Cow’s Number-Herd Transfer”.

In the meanwhile, we have formulated and strictly implemented epidemic prevention management measures for dairy farms. Our employees are required to have regular medical check-ups to ensure that there are no cross-species infections between humans and animals. If any cows are infected by infectious diseases, we will promptly deliver them to the isolated area for quarantine and inspection. For cows that cannot be cured, case reports would be filed to the relevant health and quarantine departments and the cows in question would be put down in a harmless manner through a qualified entity, entrusted by the aforementioned departments. Furthermore, employee dormitories, barns, milking halls and veterinary hospitals are disinfected regularly. Our employees are required to wear masks, hats and gloves when handling dairy cows or milk. We strictly control the people and vehicles that enter the dairy farms. Only those people or vehicles with permission can enter the dairy farms after being disinfected.

3.4 Assuring Milk Quality at Every Step

As the primary responsible party who shall assume responsibility for the quality and safety of the dairy products, the Group strictly abides by the laws and regulations relating to health and safety and methods of redress that have significant impacts on the Group, including but not limited to the *Food Safety Law of the PRC*, the *Law on Animal Epidemic Prevention of the PRC*, the *Regulations on Supervision and Administration of Quality Safety of Dairy Products*, the *Regulation on the Management of Feeds and Feed Additives* and the *Regulation on Veterinary Drug Administration*. In addition, the Group has formulated and implemented the *Management Measures of Quality and Safety of Milk* with reference to the aforesaid laws and regulations, which stipulates the major milk quality standards and requirements, to strengthen each farm’s milk quality and safety management. The Group has standardized feed management, herd management, management of the use of medicine, milking parlors management and milk transport vehicles management to ensure that milk quality meets relevant laws and regulations’ requirements and dairy products factories’ acquisition requirements. During the Reporting Period, our raw milk was not involved in any food safety incidents and did not receive any product liability claims, nor did it violate the aforementioned laws and regulations relating to relating to health and safety and methods of redress.



The Management Measures of Milk Quality and Safety of the Group





The Group uses modern milking machines imported from the US

We have established comprehensive quality control systems covering each aspect of the farm operation and set standard operating procedures (“SOP”) for each aspect of production to standardize and professionalize production. The quality control systems are monitored and enforced by our professional quality control team to ensure that we comply with the *Food Safety Law of the PRC*, the *Agricultural Product Quality Safety Law of the PRC* and other laws and regulations relating to product quality and safety and we comply with the applicable national milk safety standards of raw milk products.

Milking is an important production process for dairy farms. We always seek answers to questions like how to milk dairy cows in a more effective and timely way and how to make dairy cows more comfortable. We comply with all applicable laws and regulations relating to our production processes and raw milk produced, such as the *Agricultural Product Quality Safety Law of the PRC*, the *Regulation on the Supervision and Administration of the Quality and Safety of Dairy Products* and the *Administrative Measures for the Production and Purchase of Fresh Milk*. We have formulated and implemented standardized operating procedures of milking parlors and milking procedures to keep milking procedures clean and safe. All dairy farms are required to adopt these standardized milking procedures, which mainly include the following: udder check, pre-milking sterilization, observation of the first three squeezes, drying, milking, post-milking sterilization, cooling and collection. We strive to carry out the extraction of raw milk in a highly automated and sanitary environment by directly piping the raw milk from our dairy cows into milk tanks. The raw milk is completely insulated from any contact with the external environment, greatly minimizing the risks of tampering or contamination. Moreover, the Group has improved the milking management works by adopting a more precise manner and reinforced the implementation of these standardized milking procedures. Additionally, we have increased milking efficiency by continuously optimizing and adjusting the efficiency of the rotors² in milking parlors.

² The rotors in milking parlors refer to the rotors of the rotary milking parlor.

In order to enable our production to be carried out more scientifically and precisely, we have established professional testing laboratories for forages and feeds, milk quality, and dairy cow disease monitoring, to conduct various scientific tests so as to ensure the high quality and safety of fresh milk. In terms of milk quality, we ensure that the delivered raw milk complies with relevant quality standards by performing quality inspections and testing over all raw milk, including total bacterial count testing, veterinary drug residue testing, microbe testing, protein and fat content testing and generating testing reports for records. For products failing the initial tests, we would conduct re-inspections and dispose of the products in a harmless manner if the results are still considered unsatisfactory.

As of 31 December 2018,

the protein content of the raw milk we produced reached **3.40%** per milliliter



The raw milk quality standard and major quality indicators

Standards	Protein content (Unit: %)	Fat content (Unit: %)	Aerobic plate count (Unit: /milliliter)	Somatic cell count (Unit: /milliliter)
The Group ³	3.40	3.97	28,200	173,900
EU Standard ⁴	Not applicable	Not applicable	< 100,000	< 400,000
US Standard ⁵	≥ 3.2	≥ 3.5	< 100,000	< 750,000
PRC Standard ⁶	≥ 2.8	≥ 3.1	< 2,000,000	Not applicable

Moreover, to ensure the freshness of raw milk and its timely delivery to customers' processing facilities, we mainly sell raw milk to customers adjacent to dairy farms. We require milk transport vehicles to meet relevant requirements to ensure that their sanitation are maintained. They are also required to manage and use sealing labels in accordance with the requirements of dairy product factories. The qualified third-party raw milk transport vehicles that we have employed can all maintain an optimal storage environment for the safety and quality of raw milk during delivery.

3.5 Effective Communication, Customer First

Customers' feedback motivates us to continuously improve. Premium raw milk produced by the Group was mainly sold to China Mengniu Dairy Company Limited and Inner Mongolia Yili Industrial Group Co., Ltd. for processing into high-end liquid milk. Therefore, we maintain smooth communication with customers through work meetings, supplier assessments and other means to understand customers' requirements towards suppliers and proactively respond to their requirements of the supplier management system of “Full Life Cycle”. The Group has gained customers' recognition due to our raw milk with premium and stable quality, and active fulfillment of corporate social responsibility, and has worked with customers to develop together.

In addition, the Group has established product complaint and handling measures to maintain an effective communication channel between customers and us. Upon receipt of complaints from customers, we would immediately conduct specific investigations, and collect and preserve relevant samples for testing and analysis. Reports would be sent to our senior managers at the same time. If the product is found to be unqualified, we would instantly carry out handling procedures, including convening a special meeting for complaint analysis and adopting remedial measures accordingly. Furthermore, we would actively communicate with complainants to ensure the effectiveness of remedial measures.

³ Calculated according to the statistical quality data of the Group's raw milk in 2018.
⁴ Please refer to the Council Directive 92/46/EEC adopted by the EU.
⁵ Please refer to the Grade “A” Pasteurized Milk Ordinance promulgated by the US Public Health Service.
⁶ Please refer to the National Food Safety Standard (GB19301-2010) of the PRC.



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賀蘭中地生態牧場

04

Energy Saving and Environmental Protection, Building Eco-friendly Farms

- 4.1 Eco-friendly Farm Management
- 4.2 Strictly Controlling Emissions,
Striving to Reduce Emissions
- 4.3 Managing Resources, Saving
Energy and Reducing Consumption

- 4.4 Ecological Protection,
Green Farms
- 4.5 Environmental Key
Performance

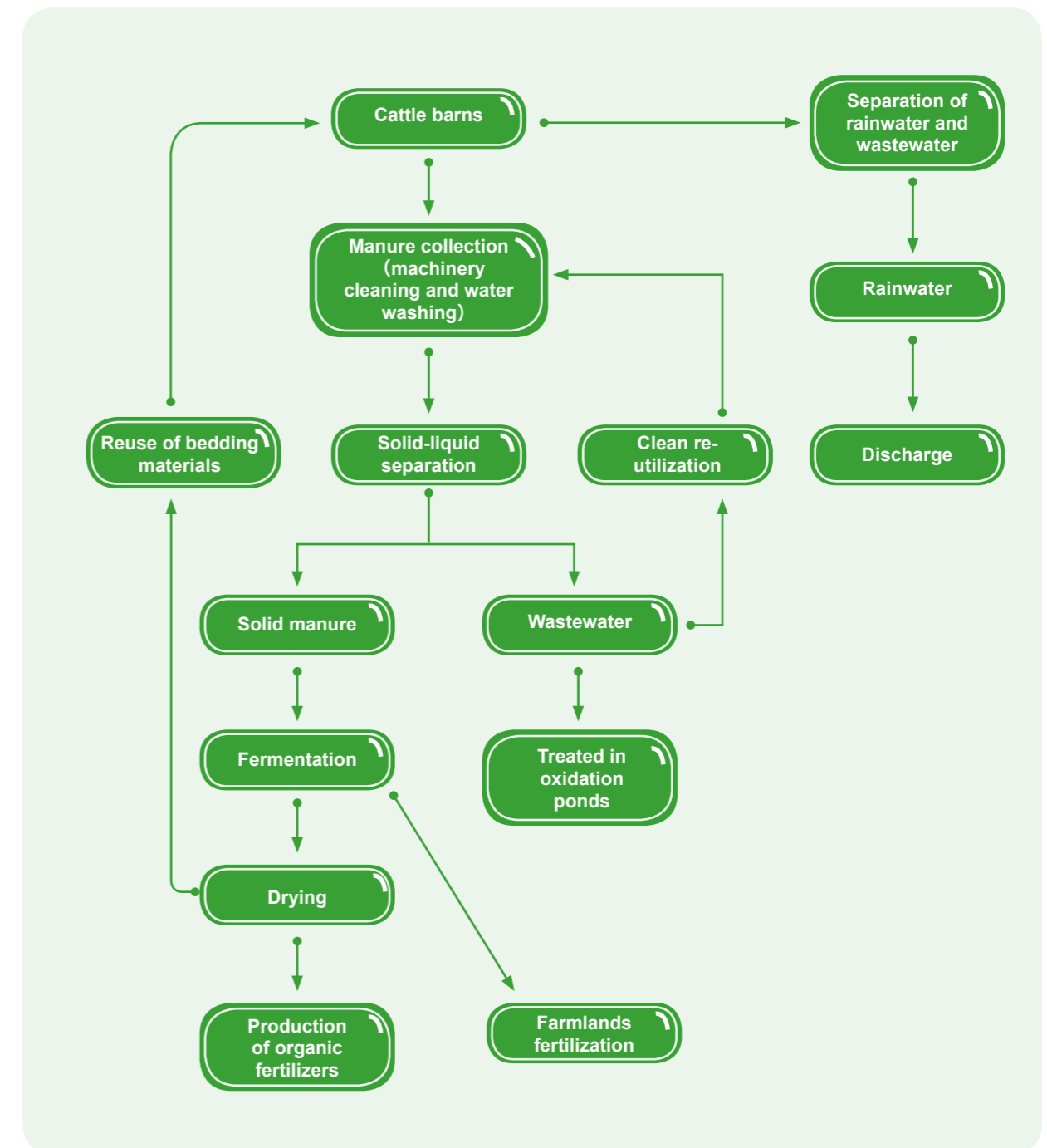
4.1 Eco-friendly Farm Management

Aiming to “Establish Sustainable and Ecological Dairy Farms”, the Group persists in taking “Clean Production”, “Pollution Prevention”, and “Total Generation Control for Pollutants” and “Beneficial Cycle between Agriculture and Animal Husbandry” as the general rules for environmental protection. We strive to develop environmentally friendly and ecological dairy farms that make waste profitable and maximize resources utilization.

The Group has formulated and implemented the environmental protection management system of dairy farms, which sets specific control targets for environmental protection, comprehensively covering aspects including air emissions, wastewater, manure handling, carcasses of afflicted cows, noises at boundary, etc., and stipulates requirements that the total emissions of pollutants should be in accordance with the local control target of pollutant emissions.

In order to implement environmental protection works during daily operations, each farm of the Group identifies and screens environmental risks on a regular basis. The scope of environmental risk identification covers the risk identification of production facilities and matters involved in the production process. Each farm checks and makes records of the operation of environmental protection facilities, and issues comments of rectification to existing problems of environmental protection and requires rectification to be done within a limit of time. Meanwhile, we have proactively applied corresponding prevention measures with reference to identified risky matters in the environmental assessment report, such as implementing wastewater seepage prevention measures and fire prevention measures, and continuously raised employees’ safety awareness. Additionally, we have proactively applied prevention measures of environmental risks and formulated contingency plans for accidents and risks, such as adopting three-levels – source, process and terminal – of prevention and risk control of water resources to ensure that treated wastewater reaches applicable requirements.

In the meanwhile, taking fully, reasonably and sustainably using resources as a target, we proactively encourage operations integrating agriculture with animal husbandry to develop an ecological and recycling mode of operation with the sustainable development of agriculture, animal husbandry and the environment. Dairy farms have been designed and constructed in accordance with various requirements of dairy farming, management, disease prevention, environment protection, etc. Sticking to the notions of dividing functional zones clearly and separating rainwater and excrement, we ensure that our farms are not only reasonably zoned and comprehensively arranged, but that they also meet the requirements of “Field Layout” mentioned in the *Construction Criterion for Standardized Dairy Cattle Farm* (NY/T1567-2007). We ensure that all emissions of our farms, such as sewage, wastes and carcasses of afflicted animals are treated in line with standards.



The excrement treatment procedures applied by the Group



The eco-friendly farm of the Group

The major wastes generated during the operation of our dairy farms are cow manure and wastewater, which are important fertilizers for farm crops after effective treatments. As such, we have used high-efficiency excrement treatment technologies for waste treatment. First, the excrement from cattle barns in the dairy farms is collected through water washing and machinery cleaning and is effectively separated into solid substances and wastewater through the professional excrement treatment system. Furthermore, considering the large volume of water required to wash the ground of cattle barns during dairy farms' operation, most of the wastewater separated from excrements is used to wash the ground. By continuously reusing treated wastewater from excrements instead of washing cattle barns with tap water, we are able to conserve a considerable amount of water. The remaining wastewater that is separated from excrements is transported to oxidation ponds for further treatment and is provided to surrounding farms for use as fertilizers after reaching the standard requirements of the *Technology Code for Land Application Rates of Livestock and Poultry Manure* (GB/T 25246-2010). Through these means, we are able to operate without discharging wastewater, and instead, can treat large volumes of wastewater from dairy farms in an efficient, reasonable and environmentally friendly way whilst cooperating with farms closely and satisfying their daily operating requirements for water and fertilizers. Moreover, a large quantity of solid substances is separated from excrement after solid-liquid separation. After fermentation and drying, a proportion of this is used as bedding materials in cattle barns or as raw materials for organic fertilizers used to farm crops.

The crops are fertilized by organic and nutrient manure and thrive, and organic crops are provided to our dairy farms as dairy cow feeds after reaching maturity. Therefore, we are able to realize the integration of agricultural operations with animal husbandry and create green, recycling and ecological farms that made wastes profitable.



The oxidation pond in a farm of the Group



The Group places manure into a solid-liquid separation facility



Dry manure from the Group's solid-liquid separation process is reused as bedding material for cows

4.2 Strictly Controlling Emissions, Striving to Reduce Emissions



The Group strictly abides by relevant laws, regulations, policies and administrative measures that have significant impacts on the Group relating to air and greenhouse gas (“GHG”) emissions, discharges into water and land, generation and disposal of waste and minimizing significant impacts on the environment and natural resources, including but not limited to the *Environmental Protection Law of the PRC*, the *Water Pollution Prevention and Control Law of the PRC*, the *Water and Soil Conservation Law of the PRC*, the *Law of the PRC on the Prevention and Control of Environmental Pollution by Solid Waste*, the *Environmental Protection Tax Law of the PRC*, the *Animal Husbandry Law*, the *Animal Epidemic Prevention Law of the PRC*, the *Regulation on the Prevention and Control of Pollution from Large-scale Breeding of Livestock and Poultry*, the *Methods for Administration of Prevention and Control of Pollution Caused by Livestock and Poultry Breeding*. In addition, we have proactively responded to the national call of “Accelerating the Reform of Ecological Civilization System and Building a Beautiful China” and the requirements of the *Opinions of the Central Committee of the Communist Party of China and the State Council on Strengthening the Ecological and Environmental Protection in All Aspects and Firmly Winning the Battle of Preventing and Controlling Environmental Pollution* by further enhancing our environmental protection management and thoroughly implementing ecological and environmental protection tasks. Hence, we have formulated and implemented the environmental protection management system for farms in alignment with relevant laws and regulations to implement relevant environmental protection works during production and operation. During the Reporting Period, the Group did not violate the aforementioned laws and regulations of environmental protection that have significant impacts on us.

The *Environmental Protection Tax Law of the PRC* has come into force since 1 January 2018 and requires enterprises and public institutions to pay environmental pollution tax in accordance with the provision of the law to protect and improve the environment, and promote the ecological civilization construction. Therefore, the Group has implemented environmental protection works by strictly fulfilling the responsibility of environmental protection management and has paid environmental pollution tax according to the law.

4.2.1 Air Emissions

The air emissions from our operations mainly include emissions from machine operations, foul odor and GHG. In order to effectively control and reduce air emissions, we have identified emission sources and subsequently taken records and calculated their emission data to acquire and analyze each farm's emission performance.

In terms of exhaust gas from machine operations, we give preference to machines that produce less emissions and are more energy-efficient. Regular maintenance is conducted to ensure machines' normal function and prevent the exhaust gas emission from increasing due to equipment malfunction. Furthermore, we use diesel with low sulfur content to reduce the emissions of sulfur oxides.

Foul odor, such as those from manure, are mainly fugitive emissions generated during our dairy farms' operation. In order to mitigate emissions' environmental impact, we have reduced their generation from the source by optimizing and appropriating feeding; kept the farms clean by ensuring that manure in farms was handled timely, and applied nebulized treatment solutions in the areas of dairy farms where manure existed to remove foul odor released into the air. By doing so, we are able to ensure that the concentrations of foul odor and gas emissions, such as ammonia, hydrogen sulfide, etc., met the requirements of the *Environmental Quality Standard for the Livestock and Poultry Farm* (NY/T 388-1999).

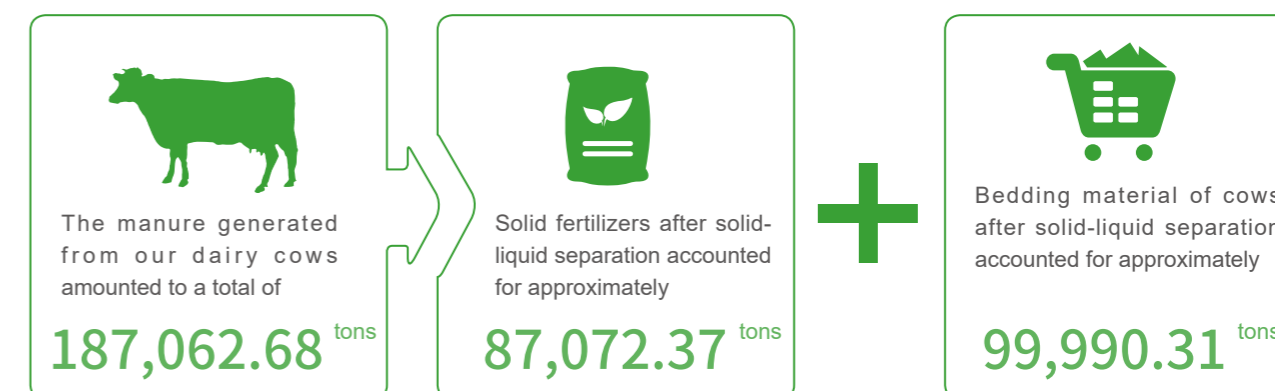
Tackling climate change and achieving the targets of controlling GHG emissions requires the active participation of every industry. The husbandry industry mostly contributes to the effects of climate change through the generation of GHG emissions, such as those from enteric fermentation and manure. Therefore, we have proactively responded to the *United Nations Framework Convention on Climate Change* and national environmental policies, such as the *Work Plan for the Control of GHG Emissions during the "13th Five-year" Period*. We have reduced our GHG emissions by conducting scientific management of our herds. Since the constitution of feeds can cause certain effects on methane emissions generated from the enteric fermentation of cows, we have continuously improved the feeding formula and feeding management to enhance the feed conversion rate so as to reduce methane emissions from the enteric fermentation of cows. Furthermore, we hope to tackle climate change by proactively applying various energy saving and emission reduction measures to mitigate environmental impacts. For more details, please refer to section 4.3.2 of the ESG Report.



4.2.2 Wastes

The handling of cow manure and other waste is one of the important works in farm operation. We treat wastes properly and comply strictly with the relevant national laws and regulations, such as the *Law of the PRC on the Prevention and Control of Environmental Pollution by Solid Waste* and the *Discharge Standards of Pollutants for Livestock and Poultry Breeding*, and the principle of "Reducing, Harmless and Resource Utilizing", etc.

Manure of dairy cows is the major waste from our operation and it is reused as much as possible through treatment by our adopted excrement treatment systems to recycle and reuse resources, and to integrate the operations of agriculture with animal husbandry. During the Reporting Period, the manure generated from our dairy cows amounted to a total of 187,062.68 tons; this was all treated, recycled and reused as solid fertilizers, which accounted for approximately 87,072.37 tons, or as bedding material of cow, which accounted for approximately 99,990.31 tons. We will continue maximizing the use of the excrement treatment system to reduce the generation of waste as much as possible, and also reduce the disposal of bedding material of cow by continuously improving the management of cow bedding through measures such as adding a drying process of bedding material.



Apart from cow manure, the wastes from our dairy farms also include carcasses of afflicted cows, liquid waste from the washing of milking machine, domestic waste and food waste. We have enhanced waste treatment efficiency by segregating waste into hazardous waste (including carcasses of afflicted cows and liquid waste from the washing of milking machines) and non-hazardous waste (including domestic waste and food waste). For the carcasses of afflicted cows, we either bury them properly or deliver them to qualified entities for proper treatment in accordance with the *Technical Standard of Preventing Pollution for Livestock and Poultry Breeding* (HJ/T 81-2001) and our formulated technical specifications for harmless treatment processing of carcasses of afflicted cows to standardize treatment procedures. The areas for the treatment of afflicted cows' carcasses are distantly located from water sources and other public places to mitigate environmental pollution. Apart from this, we do not sell or feed calves with milk from sick dairy cows; instead, they are disposed of and discarded properly. Comprehensive disinfection measures are conducted regularly in farms and overall epidemic prevention measures are taken to prevent cross-infection between herds. During the Reporting Period, there was no death of cows due to infectious diseases. Liquid wastes from the washing of milking machines could be properly treated, while non-hazardous wastes are centralized, collected and transferred to the local environment and health department for treatment. In order to further improve farms' risk management, we have also entered into outsourcing agreements with professional companies for harmless treatment processing of carcasses of afflicted cows, medical, domestic or food wastes treatment and other aspects to reduce farms' potential risk and prevent farms' operation from being affected.

We devote ourselves to doing our utmost to reduce waste generation from operation by recording the amount of waste we generate and the disposal methods used, and establish reduction plans according to the principles of reducing, reusing and recycling. In terms of washing milking machines, the farms of the Group have adopted computer-controlled equipment for automatic washing and using washing liquid accurately in a certain amount, therefore, reducing the generation of liquid wastes from the washing of milking machines. Moreover, to reduce both the usage and disposal of packaging materials, we have reused packaging materials and give preference to the bulk transportation of feeds.

4.2.3 Wastewater

In order to ensure the safety of water resources, we comply with the *Water Pollution Prevention and Control Law of the PRC* and other relevant laws and regulations and have set up wastewater treatment facilities for treating and storing the wastewater for farmland irrigation to achieve the reuse of resources in the controllable areas and the zero discharge of wastewater. In addition, rainwater and wastewater separation systems have been established in our farms to prevent wastewater from contaminating the surrounding water. Moreover, all sheds for dry manure storage in our farms and wastewater treatment facilities are equipped with seepage prevention measures and rainproof shelters.

4.3 Managing Resources, Saving Energy and Reducing Consumption

The way that we concern every aspect of energy saving and environmental protection in our daily life is just like the attitude of cherishing each drop of our high-quality milk. During operation, the major resources we use are water resource and energy (such as electricity, diesel).

4.3.1 Water Resource

Water is a valuable resource. We think highly of using water resource efficiently. Therefore, we have proactively adopted various measures listed as follows during daily operation to increase the use of water resource and save it efficiently:

implementing water usage plans by recording water consumption from each dairy farm, such as conducting water consumption analysis for processes requiring water such as the washing of milking equipment and cleaning the farm environment to maintain its sanitation;

proactively using an excrement treatment system to separate wastewater which is mostly used for dairy farm's ground washing so as to reduce a large amount of wastewater discharge and save a lot of fresh water. For more details, please refer to section 4.1 of the ESG Report;

equipping the sinks of our cattle barns with water-saving valves and using water-saving washing guns;

strictly conserving water resources and protecting the environment by proactively adjusting and upgrading equipment, such as adjusting the water consumption for equipment cleaning each time upon use, and purchasing the high-pressure cleaning equipment to improve cleaning efficiency and reduce water usage; and installing inductive switches to water taps in dormitories.

During the Reporting Period, Kuandian ZhongDi Farm, Tianzhen ZhongDi Farm and Tianjin ZhongDi Farm reduced water resource by purchasing and using the high-pressure cleaning equipment, installing spraying devices and other measures. Furthermore, we have posted water saving labels in certain areas to remind employees how valuable the water is and to raise their water saving awareness.

In terms of water sourcing, water used by the Group is mainly sourced from municipal fresh water supplies and wells. With the ideal geographical location of our dairy farms, the full consideration of water sourcing and the understanding of regional water stress during the design of projects, the Group did not find any major issues relating to water sourcing during the Reporting Period.

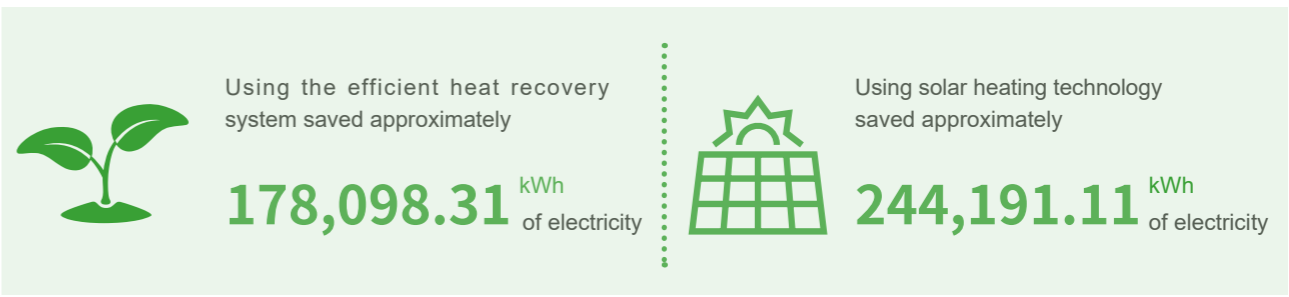


The water saving labels of the Group

4.3.2 Energy

The Group proactively responds to the green, low-carbon and recycling development and complies with the *Energy Conservation Law of the PRC* and other laws and regulations relating to the use of resources. We have proactively formulated energy use plans by recording and analyzing the comparison of energy use of each farm to enhance the equipment's energy use management and its technical upgrade.

First of all, we have selected croppers located near our dairy farms to act as feed suppliers, which reduces expenditures on transportation, and also reduces energy consumption and carbon emissions arising from transportation. Furthermore, we have saved energy by using milking equipment that works with an efficient heat recovery system, which could recover generated heat during the milk cooling process. The recovered heat could be used for water heating so as to achieve energy saving. During the Reporting Period, the Group saved approximately 178,098.31 kilowatt-hours ("kWh") of electricity by using this system, which was calculated based on the energy saving efficiency provided by the supplier of the heat recovery system. Moreover, solar devices have been installed on the roofs of our employee dormitories or changing rooms. These satisfy the needs of our employees for hot showers with solar power generation technology and solar heating technology. During the Reporting Period, the Group saved approximately 244,191.11 kWh of electricity by using solar heating technology, which reduced the emissions of carbon dioxide ("CO₂"). In addition, we have installed light-emitting diodes (LED) in cattle barns to save electricity, and installed voice-activated lights to control lights intelligently without human control and to reduce electricity consumption.



Additionally, we uphold the spirit of diligence and economization to formulate management measures for business travel and advocate employees to take transportation according to their actual needs. Electricity-saving labels have been posted near switches as reminders to increase the environmental awareness of our employees.



4.4 Ecological Protection, Green Farms

The Group has implemented environmental impact analyses and assessments of new construction projects and dairy farms and projects that are changed in accordance with relevant regulations, such as the *Environmental Protection Law of the PRC*, *the Law of the PRC on Evaluation of Environmental Effects*, etc. The Group has also continuously promoted environmental protection works and strengthened environmental protection facility management by ensuring the stable and efficient operation of the environmental protection facilities, and by adopting more advanced environmental protection technologies and enhancing facilities' renovation.

Our impacts on the ecological environment according to the environmental impact assessment are mainly the alteration of local plantations and water and soil loss due to dairy farm constructions. Therefore, we do our utmost to reduce damage to the original plants during project construction, and formulate and implement strict and reliable soil and water measures during daily operations. Furthermore, we highly consider the conservation of water and soil conservation by continuously planting trees, enhancing maintenance and greening management. In order to improve the ecological environment and create a green and eco-friendly living environment, we have carried out afforestation to prevent soil erosion, to bring fresh air and absorb CO₂. During the Reporting Period, the Group planted an accumulative 6,973 trees in total, which could absorb 160.38 tons of CO₂ in total.



The green farm of the Group

There are certain noises that come from our dairy farms during construction and operation. We have mitigated these impacts on the surrounding environment and controlled noises from the source by giving preference to low-noise equipment. For existing noisy equipment, damping devices, soundproof covers or acoustic filters have been installed. Moreover, noise barriers with soundproof construction materials have been built between facilities to reduce noises.

Furthermore, to better promote our green life ideas, we cultivate and introduce professionals specializing in environmental protection on a regular basis. We also regularly hold workshops relating to environmental protection, energy saving and emission reduction, aiming to continuously enhance the environmental awareness and skills of our employees.

4.5 Environmental Key Performance

During the Reporting Period, the Group’s performance of major emissions was as follows:

Indicators	Unit	2018	2017
Annual milk yield	Tons	364,316.45	296,656.49
Air pollutants ⁷			
Sulfur oxides emissions	Tons	0.05	0.04
Nitrogen oxides emissions	Tons	49.40	44.49
GHG			
Scope 1: direct emissions			
Dairy cow enteric fermentation ⁸	Ten thousand tons CO ₂ equivalent	12.95	11.50
Machine used in operation ⁹	Ten thousand tons CO ₂ equivalent	0.73	0.67
GHG emission reduction due to planted trees ¹⁰	Tons CO ₂ equivalent	160.38	34.94
Scope 1 total emissions	Ten thousand tons CO ₂ equivalent	13.67	12.16
Scope 2: indirect emissions			
Scope 2 total emissions (electricity consumption) ¹¹	Ten thousand tons CO ₂ equivalent	3.73	3.08
Total emissions of scope 1 and 2	Ten thousand tons CO ₂ equivalent	17.40	15.25
Emission intensity of scope 1 and 2	Ten thousand tons CO ₂ equivalent/ tons milk yield	4.78 x 10 ⁻⁵	5.14 x 10 ⁻⁵

⁷ The air pollutants were mainly sourced from the Group's machines and its calculation was set out based on the *Non-Road Vehicles Air Pollutant Emission Inventory Preparation Technical Guide (Trial)*. The data used in the calculation in air pollutant emissions was sourced from the recorded data of the Group and best conservative estimates were made based upon historical performance data or benchmarking with similar facilities.

⁸ The calculation of GHG emissions from dairy cow enteric fermentation in 2018 was set out based on the *Guidance for Compiling Provincial GHG Emission Inventory (Trial)* and adopted its provided methane emission factor of animal enteric fermentation. The GHG emissions from dairy cow enteric fermentation in 2017 was recalculated based on the same methodology. Therefore, the data listed here was revised and the relevant GHG data in 2017 shall be subject to the data listed here.

⁹ The calculation of GHG emission from machine used was set out based on the *Guideline of the GHG Emissions Accounting and Reporting for the Land Transportation Enterprise (Trial)* and the *GHG Inventory Guidance—Direct Emissions from Mobile Combustion Sources*.

¹⁰ The calculation of GHG reduction by planted trees was set out based on the *Guidelines to Account for and Report on GHG Emissions and Removals for Building (Commercial, Residential or Institutional Purposes) in Hong Kong* published by Electrical and Mechanical Services Department and Hong Kong Environmental Protection Department.

¹¹ The calculation of GHG emission from electricity consumption was set out based on the *Guidance for Compiling Provincial GHG Emission Inventory (Trial)* and the *2011 and 2012 Chinese Regional Grid Average Carbon Dioxide Emission Factor* published by National Development and Reform Commission of the PRC.

During the Reporting Period, the Group’s performance of use of resources was as follows:

Indicators	Unit	2018	2017
Water consumption	Tons	2,692,433.45	1,488,119.36
Intensity of water consumption	Tons/tons milk yield	7.39	5.02
Electricity consumption	kWh	46,347,444.78	38,190,344.25
Intensity of electricity consumption	kWh/tons milk yield	127.22	128.74
Coal gas consumption	Tons	20.79	16.52
Intensity of coal gas consumption	Tons/tons milk yield	5.71 x 10 ⁻⁵	5.57 x 10 ⁻⁵
Diesel	Litres	2,793,530.00	2,566,972.50
Intensity of diesel consumption	Litres/tons milk yield	7.67	8.65
Packaging materials used for feeds	Tons	442.01	-
Heat recovery from milking systems	kWh	178,098.31	161,357.40
Saved energy from solar water heater	kWh	244,191.11	244,191.11

During the Reporting Period, the Group’s performance of wastes was as follows:

Indicators	Unit	2018	2017
Hazardous wastes			
Liquid wastes from the washing of milking machines	Tons	101.61	92.96
Total amount of generated hazardous wastes	Tons	102.11	92.96
Intensity of generated hazardous wastes	Tons/tons milk yield	2.80 x 10 ⁻⁴	3.13 x 10 ⁻⁴
Non-hazardous wastes			
Domestic wastes	Tons	111.15	65.00
Food wastes	Tons	164.95	172.90
Total amount of generated non-hazardous wastes	Tons	276.10	237.90
Intensity of generated non-hazardous wastes	Tons/tons milk yield	7.58 x 10 ⁻⁴	8.02 x 10 ⁻⁴
Solid fertilizers after solid-liquid separation	Tons	87,072.37	110,340.90
Bedding material of cows after solid-liquid separation	Tons	99,990.31	99,346.73



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05

Being People-oriented, Creating an Inspiring Team

5.1 Protecting Employees'
Rights and Benefits

5.2 Putting Health and Safety
at the First Place

5.3 Scientific Training,
Employee Development

5.4 Cultivation of Culture,
Enriching Life

5.1 Protecting Employees' Rights and Benefits


The Group strictly complies with relevant laws and regulations that have significant impacts on the Group relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, other benefits and welfare and prevention of child labor and forced labor, including but not limited to the *Labor Law of the PRC*, the *Labor Contract Law of the PRC*, the *Trade Union Law of the PRC*. Meanwhile, we have formulated the human resources management systems to protect the legal rights of the Group and employees. In terms of the prevention of child labor, the Group strictly complies with the *Law of the PRC on the Protection of Minors* and other applicable laws and regulations, resolutely objecting to hiring minors under 16 years old as employees. The Human Resources Department of the Group's headquarter is responsible for reviewing employee documents and ensuring compliance with all laws and regulations relating to employment. During the Reporting Period, the Group did not violate the aforesaid laws and regulations relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, other benefits and welfare and the prevention of child labor and forced labor.

The Group has established comprehensive human resources management systems

and has clarified various employee issues relating to salary, position, benefit, training, termination reasons for dismissal and other matters by formulating recruitment management measures, enterprise labor contract management measures, salary and benefit management policies, performance evaluation measures, selection and promotion management for managers and others. We have established employment policies that advocate equality and diversity, and provided a diversified employment environment. There is no discrimination against employees because of race, nationality, color, gender or other conditions.

We are in accordance with the principle of fairness and justice

recruitment is conducted according to recruitment management measures. Furthermore, candidates' information is strictly verified during recruitment to prevent hiring child labor. The Group enters into labor contracts with employees in accordance with laws to clearly state matters such as employee remuneration, benefits, reasons for termination of dismissal and other matters. As of 31 December 2018, the signing rate of labor contracts reached 100%. As for resignation, relevant procedures are proceeded according to relevant regulations and the conditions stipulated in the labor contract.



We continuously adjust and improve our existing salary policies and aim to attract, retain and motivate outstanding employees by providing competitive compensation, benefits and promotion opportunities.

We put emphasis on performance evaluation and have adjusted the salary policy and employees' remuneration and benefit regularly based on their respective duties, performance, work experience, and the market and industry rates. Through the recruitment of professional management personnel via various channels as well as internal placement and promotion of outstanding staff within the Group, we have built a high quality, efficient and young team to improve our management standards and efficiency.

We have formulated regulations for attendance management to specify employees' working hours and holidays. In addition, we have instituted the standard working hours system to prohibit forced labor, and we ensure that our employees can enjoy paid leave, marriage leave, bereavement leave, maternity leave, paternity leave and other public holidays in line with the regulations. We have provided and established (including but not limited to) statutory benefits of social security funds (including basic medical insurance, pension insurance, work-related injuries insurance, unemployment insurance and childbirth insurance), housing provident funds and other statutory benefits, as well as commercial insurance for accidental injuries for our employees.

As of 31 December 2018, the Group had 1,256 formal employees in mainland China and Hong Kong in total. The following table sets forth a breakdown of employees by different types:

Indicators	2018
Total number of employees	1,256
Total employees by gender	
Male	929
Female	327
Total employees by business types	
Full time	1,226
Part-time	0
Internship	30
Total employees by age group	
20 years old or below	9
21-30 years old	333
31-40 years old	363
41-50 years old	431
51-60 years old	117
61-70 years old	3



5.2 Putting Health and Safety at the First Place

The works of safety production should put people as the first priority. We strictly abide by the national and local laws and regulations that have significant impacts on the Group, such as the *Law of the PRC on the Prevention and Control of Occupational Diseases* and the *Provisions on the Supervision and Administration of Occupational Health at Work Sites*, to ensure the safety of working environment and prevention of employee's occupational hazards. Moreover, sticking to the safe production management policy, "Safety First and Precaution is Crucial", we ensure the fulfillment of zero personal and equipment accidents as the goal of safe production management by thoroughly implementing a responsibility system for safe production and relevant regulations and practices, and continuously increasing the safe production awareness of all employees of the Group. During the Reporting Period, the Group did not violate the aforementioned national laws and regulations relating to the provision of a safe working environment and the protection of employees from occupational hazards.

We have established management measures for safe production, which stipulate the organizational arrangement for safe production and set a leading unit of safe production formed by the Group's management and safe production management personnel. By doing so, we are able to fully implement the accountability system of safe production and labor protection works, and ensure the provision of a safe workplace to employees to keep them away from occupational hazards. Each farm has formulated a responsibility letter of safe production regarding every position, stipulating the safety requirement of each position and the safety personnel that are responsible. Meanwhile, we have established a sound regular meeting system for safety production. We hold safe production meetings regularly, analyzing and summarizing the situation of safe production as well as proposing countermeasures and implementations for material safe production issues.

Hidden risks are more dangerous and prevention is better than cure. Therefore, we have established safe production inspections and mechanisms for screening and identification of work safety hazards. Inspections on safe production are conducted regularly, including but not limited to regular overhauls on production equipment, fire drills, inspections on whether operation areas and storage places are in line with safety regulations, inspections on whether personal protection equipment is well-equipped and whether employees are in line with regulations of safe production operation. The safe production management personnel are responsible for the identification and screening of work safety hazards, following by the assessment and generation of reports for records. Last but not least, control and rectification are implemented on schedule.

We would hold regular fire drills to strengthen the trainings for our fire prevention instructors and employees and enhance the abilities of employees to cope with fire contingencies. Moreover, we have also formulated contingency plans for safe production to raise our abilities to cope with contingencies, place emergencies under control and reduce losses as soon as possible.



A fire drill of the Group

In addition, we provide safe production education and trainings to our employees and organized employee exchange programs and other activities, to ensure that they obtained necessary knowledge of safe production and awareness in occupational health, and acquired the capability in safety management. At the same time, labor protection equipment that is consistent with the national standards is provided, together with the supervision on their correct wearing and usage. Furthermore, we raise the safety awareness of our employees by posting safety warning signs in the dairy farms. We also arrange regular body check-ups and establish occupational health archives for our employees.



The Group's safe production management system and measures



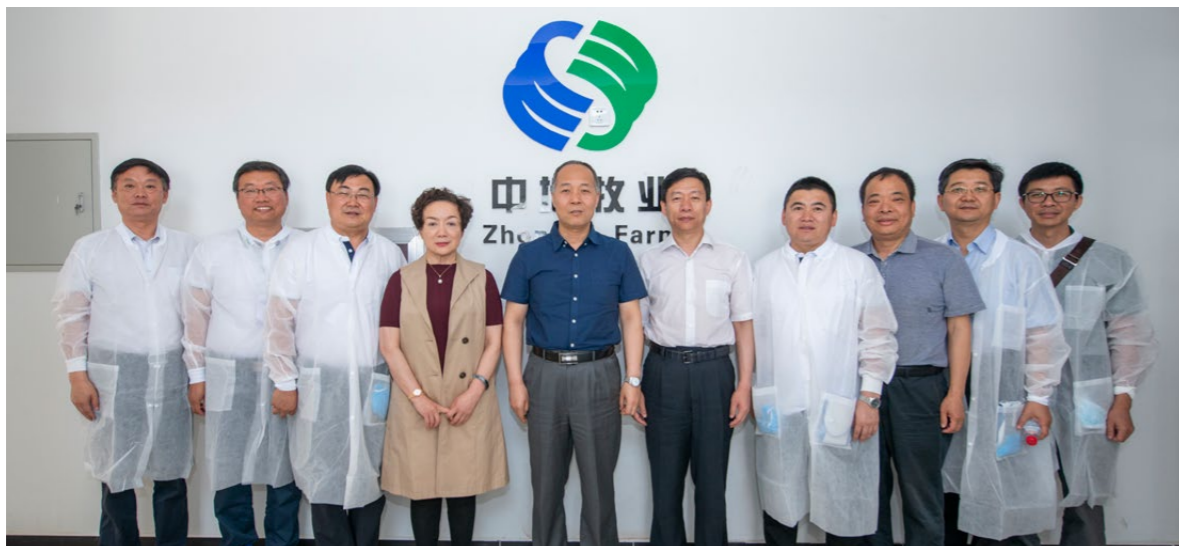
5.3 Scientific Training, Employee Development

We attach great importance employees' continuous improvement of their professional and technical skills and comprehensive capabilities. We have formulated and implemented training management measures and established employees' training plans and annual working plan every year in line with the Group's development strategy, operation plan and actual situation of human resource management. Technical and administrative trainings, which are targeted and diverse, are provided to employees to raise their safety awareness and improve business and management skills. By doing so, employees' career development path can be broadened. Additionally, we send our farm technicians to participate in national and overseas trainings, encouraging our employees to adopt an international vision.



Focusing on the ecological farm and increasing the dairy industry's competitiveness—Langfang ZhongDi Farm successfully held the 100th Mengniu's special "Dairy Golden Key" event

The "Dairy Golden Key" project is a specific event for interaction created by the national technology system of the dairy industry. It aims to help farms to reduce cost and increase efficiency and dairy industry's competitiveness by providing an effective integration of on-site diagnosis service, specific technical report, demonstration of technical and operational methods and technical meeting and communication. As the main venue of the event, Langfang ZhongDi Farm demonstrated its farm's managerial and administrative expertise to visitors and improved employees' administrative and operational skills.



Before the event, Zhang Kaizhan, the Company's executive director, gave a general introduction of the company to the leaders attending the meeting



The event was full of attendees



The on-site assessment in the milking cow barn of Langfang ZhongDi Farm



The 2018 Annual Meeting of the Group

5.4 Cultivation of Culture, Enriching Life

We always care about employees' physical and psychological health. By creating an inspiring and uniting work environment, we march toward a better future together with employees. We try our best to create a great communication environment with our employees. We set up the employee opinion box which allows us to understand our employees' needs promptly and carefully. In addition, we proactively conduct cultural cultivations by organizing activities to enrich employees' life.



The 2018 work meeting of the Group



The Group's employees doing physical exercises



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06

Improving Together, Promoting the Industry's Development

6.1 Sustainable Supply Chain, Co-development with Mutual Benefits

6.2 Caring the Society, Growing Together

6.1 Sustainable Supply Chain, Co-development with Mutual Benefits

Suppliers are our important partners. As a part of the supply chain, we hope to develop with other suppliers and create a sustainable supply chain. We have formulated practices for supplier management, procurement management measures and management measures for importing businesses to regulate the management of suppliers to ensure that our selection of suppliers follows the principles of rationality and effectiveness, openness and fairness, objectiveness and truthfulness, and principles relating to comprehensive assessments, supervision and control.

When selecting suppliers, we have comprehensively considered their operational qualification and quality, and evaluated their environmental, social and other performance to reduce the potential environmental and social risks in the supply chain. The criteria of supplier selection include but is not limited to:

whether they have qualified business licenses and export licenses;

the quality of the products that suppliers provide, such as whether the cows supplied meet the contractual requirements;

the concept of quality management;

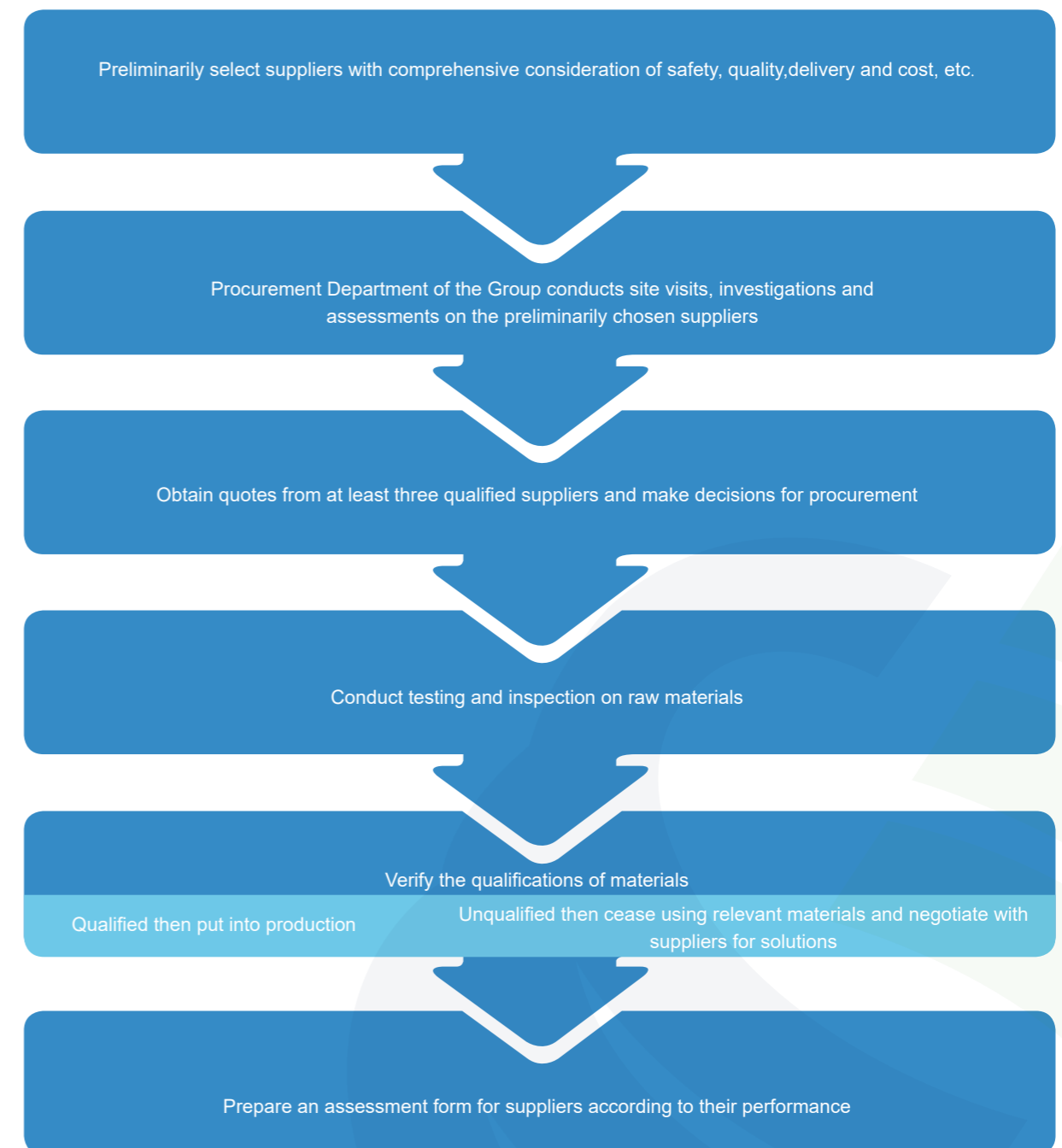
after-sale service and the capability of handling emergencies;

whether they comply with environmental protection laws, regulations and policies and meet those requirements; and

whether they prohibit child labor at all times, etc.

We have set up a procurement department responsible for supplier selection. We would conduct site visits, investigations and assessments on their factories after preliminarily screening and selecting major suppliers who intend to cooperate with us. As for goods like feeds, we conduct site visits and collect samplings for testing as the procurement reference from feeds suppliers. With regard to our import trading businesses, we import cows and alfalfa hay from overseas suppliers who specialize in husbandry. We have formulated management measures for import business in accordance with the *Law of the PRC on the Entry and Exit Animal and Plant Quarantine* to standardize the management of overseas suppliers' development and maintenance. By doing so, we are able to ensure the quality of our imported goods.

Moreover, we uphold the principle of "Energy Saving and Cost Reducing". Any issues relevant to extravagance and waste, and illegal procurement of materials and equipment would be seriously dealt with. In addition, we follow an open, fair and just principle to process the procurement of materials. Our procurement staff are required to be self-disciplined, fair and upstanding and must not pursue self-interests. In order to ensure the quality of purchased materials, we have implemented various courses of acceptance procedures, including document verification, preliminary inspection and inspection on indicators, and tracking mechanisms for raw materials.



The supplier selection and evaluation process of the Group

6.2 Caring the Society, Growing Together

We have always upheld the spirit of a willing ox and hope to have mutual development with every stakeholder, to care the society, and to considerably give back to the society by providing assistance and supports to the adjacent communities. We hope to develop with the community together and grow up together healthily through practices such as proactively promoting the development of local agriculture and persisting in operations which integrate agriculture and animal husbandry and developing circulated economy to help increase farmers' income; promoting the increase in income of local farmers through the circulation of land, and, simultaneously, proactively creating employment opportunities for local citizens in the community near our farms so as to absorb rural laborers; reinforcing cooperation with local farmers and devoting ourselves to creating ecological farms that integrate agriculture and animal husbandry.

The dairy industry is indispensable for a healthy nation and strong people.

The government has promulgated a series of policies and regulations to support the development of China's dairy industry, which creates a constructive environment for industrial development. As a member of the dairy industry, we hope to create a bright future with the Chinese dairy industry and improve the industry's sustainability. We actively participate in various activities held by the dairy industry for communication and exchange and take the initiative to build a discussion platform at the same time. It is our hope to foster the development and enhance quality of the dairy industry, respond to the call of promoting the agricultural modernization progress and try our best to help drive the modernization of the dairy industry.



During the Reporting Period, the Group made charitable and other donations amounting to RMB**141,004**.



Promoting the development of milk source bases and the invigoration of the dairy industry—the Group, a newly joined enterprise, made its debut in Hulunbuir

The Group participated in the “2018 China Dairy 20 (D20) Summit” held on 27 September 2018. The theme of the summit was “Fully Promoting High Quality Development, Strengthening and Improving the China Dairy” with the aim of promoting the dairy industry's invigoration and creating a healthy China.



In the afternoon of 27 September 2018, Yu Kangzheng from the Ministry of Agriculture and Rural Affairs of the PRC, Li Defa, the chairman of the Dairy Association of China, Zhang Jianshe, the Company's Chairman, and other D20 enterprises' leader jointly launched the national digitalized information service platform of the dairy industry

The Group is a new, and the only farming company selected in D20. In the meeting, Zhang Jianshe, the Company's Chairman, made an excellent speech entitled “Farm Efficiency is a Motivation of the Development of Milk Source Bases”



A group photo at the Group's demonstration booth of Zhang Kaizhan, the Company's executive director, and Song Naishe, the Company's vice general manager

7. Looking into the Future

Sustainable development is essential to an enterprise with the aim of growing and strengthening its business as well as improving its core competitiveness, and it is also a key driver of continuous business growth in the future. Based on the “Higher Standards, Stricter Requirements, Stronger Enforcement and Higher Productivity”, the Group strives to keep incorporating sustainable development into our business model and improve farm management. By doing so, we hope to create win-win cooperation with various parties and contribute to the society by proactively fulfilling corporate social responsibility. The environment, talent and society are the focus points of our sustainable development. We will spare no effort to promote eco-friendly development and reinforce our cooperation with communities adjacent to farms to achieve the harmonious development among humans, animals and the environment.



SEHK's ESG Reporting Guide Index

General Disclosures and KPIs	Description	Relevant Chapter(s) in the ESG Report or Other Explanation
Environmental		
Aspect A1: Emissions		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste	4.1, 4.2 and 4.4
KPI A1.1	The types of emissions and respective emissions data	4.5
KPI A1.2	Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	4.5
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	4.5
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	4.5
KPI A1.5	Description of measures to mitigate emissions and results achieved	4.1, 4.2.1 and 4.3.2
KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved	4.2.2
Aspect A2: Use of Resources		
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials	4.3
KPI A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility)	4.5
KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility)	4.5
KPI A2.3	Description of energy use efficiency initiatives and results achieved	4.3.2

General Disclosures and KPIs	Description	Relevant Chapter(s) in the ESG Report or Other Explanation
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved	4.3.1
KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced	4.5
Aspect A3: Environment and Natural Resources		
General Disclosure	Policies on minimizing the issuer's significant impact on the environment and natural resources	4
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them	4
Social		
Aspect B1: Employment		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare	5.1 and 5.4
Aspect B2: Health and Safety		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards	5.2
Aspect B3: Development and Training		
General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities	5.3

General Disclosures and KPIs	Description	Relevant Chapter(s) in the ESG Report or Other Explanation
Aspect B4: Labor Standards		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labor	5.1
Aspect B5: Supply Chain Management		
General Disclosure	Policies on managing environmental and social risks of the supply chain	6.1
Aspect B6: Product Responsibility		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labeling and privacy matters relating to products and services provided and methods of redress	2.2 and 3 Information on advertising is not applicable ¹²
Aspect B7: Anti-corruption		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering	2.2
KPI B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored	2.2
Aspect B8: Community Investment		
General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests	6.2

¹² As for advertising and labeling, the Group has not put advertisements during our operations and we, as a raw milk supplier, have not launched the produced raw milk into the market. As such, our products and services provided do not have direct relations with the issues of advertising.



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