



China Modern Dairy Holdings Ltd.

中國現代牧業控股有限公司

(Incorporated in the Cayman Islands with limited liability)
(於開曼群島註冊成立之有限公司)

Stock Code 股份代號: 1117



连续九年荣获世界食品品质评鉴大会

— 金奖 —

2022

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

環境、社會及管治報告



目錄

Contents

報告說明 About This Report	4
總裁致辭 CEO's Statement	6
走進現代牧業 About Modern Dairy	8
企業文化 Corporate Culture	10
企業事記 Milestones	11
企業榮譽 Enterprise Achievements	13
構建責任管理 Responsible Management	14
公司治理 Corporate Governance	14
風險管理 Risk Management	16
可持續發展管理 Sustainable Development Management	19
1. 推動可持續運營 1. Promoting Sustainable Operations	34
1.1 打造智慧牧場 1.1 Building Smart Farms	35
1.2 發展可持續農業 1.2 Developing Sustainable Agriculture	45
1.3 開展雙碳行動 1.3 Carrying out the "Dual-carbon" Project	62
1.4 應對氣候變化 1.4 Addressing Climate Change	69
1.5 踐行綠色運營 1.5 Practicing Green Operation	78

2. 普惠動物福利.....	100
2. Promoting Animals' Welfare	
2.1 環境及行為福利.....	103
2.1 Environmental and Behavioural Welfare	
2.2 生理及心理福利.....	109
2.2 Physiological and Psychological Well-being	
2.3 健康及安全福利.....	114
2.3 Health and Safety Welfare	
3. 守護高品質產業鏈.....	119
3. Guaranteeing the High-quality Industrial Chain	
3.1 追求卓越品質.....	120
3.1 Pursuing Excellent Quality	
3.2 提供優質服務.....	133
3.2 Providing Quality Services	
3.3 可持續供應鏈.....	138
3.3 Sustainable Supply Chain	
4. 踐行共同富裕使命.....	150
4. Fulfilling the Mission of Common Prosperity	
4.1 謀福利的「養牛人」.....	151
4.1 Responsible "Cow Keeper"	
4.2 謀進取的「養牛人」.....	170
4.2 Ambitious "Cow Keeper"	
4.3 重執行的「養牛人」.....	189
4.3 Pragmatic "Cow Keeper"	
未來展望.....	195
Future Prospect	
附錄：港交所ESG報告指引指標索引.....	196
Appendix: HKEx ESG Reporting Guide Indicator Index	

報告說明 About This Report

本報告是中國現代牧業控股有限公司(本公司)發布的環境、社會及管治(以下簡稱「ESG」)報告，重點披露本公司於報告期內，在環境及社會風險管理方面的行動和表現，以滿足利益相關方對本公司的期望和要求。

This Report is the Environmental, Social and Governance (“ESG”) Report issued by China Modern Dairy Holdings Limited (the “Company”) to focus on the disclosure of the Company’s actions and performance in the aspects of environmental and social risk management during the reporting period to satisfy the expectations and requirements of the stakeholders to the Company.

本公司相信，健康的環境、社會及管治表現對未來可持續發展、達成長期目標和為股東創造價值起着決定性影響。本公司在財務表現穩健提升的同時，密切關注企業社會責任的履行與可持續發展。

The Company believes that healthy environmental, social and governance performance is of paramount importance to our future sustainable growth, realizing long-term goals and creating value for our shareholders. The Company has all along been attentive and persistent in carrying out corporate and social responsibilities and has been fostering sustainable development of the Group while steadily improving its financial performance.

報告期內，本公司遵守相關環境、社會及管治報告指南所載的條文進行披露，無環境、社會及管治方面重大不合規事宜發生。

During the reporting period, the Company has complied with the relevant disclosure requirements as set out in the ESG reporting guide and no material non-compliance in the aspects of the environment, society and governance are identified.

報告範圍 Reporting Scope

報告的組織範圍：本報告以中國現代牧業控股有限公司及其子公司為主體，根據重要性原則涵蓋本公司主要營收來源－原奶銷售及飼料銷售業務，涵蓋現代牧業下屬各牧場。

Organizational scope of this Report: Focusing on China Modern Dairy Holdings Ltd. and its subsidiaries, this Report covers the Company’s main source of revenue-raw milk sales and feed sales business according to the principle of materiality, covering all farms under Modern Dairy.

報告的時間範圍：2022年1月1日－2022年12月31日。

Reporting period: 1 January 2022–31 December 2022.



編寫依據

Preparation Basis

報告編製根據香港聯合交易所《環境、社會及管治報告指引》(「**聯交所ESG指引**」)，同時參考全球可持續發展標準委員會(GSSB)發佈的《GRI可持續發展報告標準》(GRI Sustainability Reporting Standards)。

This Report is prepared in accordance with the Environmental, Social and Governance Reporting Guide of The Stock Exchange of Hong Kong Limited (the “**HK Stock Exchange ESG Guide**”), and with reference to the GRI Sustainability Reporting Standards issued by the Global Sustainability Standards Board (GSSB).

數據說明

Information in This Report

報告中所有數據來自現代牧業正式文件和統計報告，如與年報數據不一致，請以年報為準。

All data set out in this Report are adopted from the internal documents and relevant statistics of Modern Dairy.

指代

References

為便於表述和方便閱讀，「中國現代牧業控股有限公司及其子公司」在本報告中以「現代牧業」、「公司」、「本公司／本集團」或「我們」表示。非特殊說明，報告中貨幣單位「元」即「人民幣元」。

For the convenience of presentation and reading, the words “Modern Dairy”, “company”, “the Company/ Group” or “we” refer to “China Modern Dairy Holdings Ltd. and its subsidiaries” throughout this Report. Unless otherwise specified, the currency unit “yuan” in this Report refers to “RMB”.

報告獲取

Access to This Report

您可以在港交所網站及現代牧業網站主頁獲取本報告的中、英文PDF版本。

You can access this Report in Chinese and English in PDF on the website of Hong Kong Exchanges and Clearing Limited and the home page of Modern Dairy.

港交所披露官網：

Official website of HKEX news:

<http://hkexnews.hk/>

現代牧業官網：

Official website of Modern Dairy:

<http://www.moderndairyir.com/>

本報告以中英文兩種文字出版，在對兩種文本理解發生歧義時，請以中文文本為準。

This Report is published in both Chinese and English. In case of any discrepancies between the two versions, the Chinese version shall prevail.

總裁致辭

CEO's Statement

奶業是建設「健康中國」、增強民族體質不可或缺的產業，是農業和食品工業現代化標誌性產業，更是與三農發展、鄉村振興密切相關的民生產業。作為奶業龍頭企業，做大做強做優做精奶業，現代牧業責無旁貸。

The dairy industry is an indispensable industry for building a "Healthy China" and strengthening the national physique. It is a landmark industry for the modernization of agriculture and food industry, and it is also a livelihood industry that is closely related to the development of agriculture, rural areas and farmers and rural revitalization. As a leading company in the dairy industry, Modern Dairy is duty-bound to make the industry bigger, stronger, better and refined.

2022年，現代牧業錨定五年領跑計劃目標，匯眾智、聚眾力，把握行業機遇，提升內增效益。依托奶牛養殖，在做強核心業務的基礎上進軍飼料板塊，打通交易平臺、培育育種業務、發展肉牛產業，進一步完善全產業鏈布局。在提高綜合業務能力的同時，我們持續踐行綠色理念，加快建設可持續產業鏈，在推動數字化轉型、提供品質服務、助力員工成長、開展公益慈善等方面擁有顯著成績。

In 2022, focusing on the goal of the "Five-Year Lead Plan", Modern Dairy gathered resources and manpower to seize industry opportunities and improve the benefits of internal growth. Leveraging on the dairy farming business and on the basis of strengthening the core business, it entered the feed sector, opened up trading platforms, cultivated the breeding business and developed the beef cattle industry, with a view to further improving the layout of the entire industrial chain. While improving our comprehensive business capabilities, we continued to practice the green concept, accelerate the construction of a sustainable industrial chain, and have made remarkable achievements in promoting digital transformation, providing quality services, helping employees grow, and carrying out public welfare and charity.

優化「數字大腦」，大力發展優質原奶。我們秉承「牧育健康牛，守護每一滴好奶」的宗旨，打通飼料供應鏈、奶牛養殖端、牛奶生產端的質量數據，實現生產各環節可視可控，落實質量追蹤，用全產業鏈數智化助力國民營養計劃，開啓數智化階梯戰略的新徵程。

Optimizing the "digital brain" and vigorously developing premium raw milk. Adhering to the tenet of "raise healthy cows, safeguard each and every drop of milk", we have opened up the quality data of the feed supply chain, dairy farming end and milk production end, so as to realize the visibility and controllability of each production link and implement quality tracking. In this way, the digital intelligence of the whole industry chain can be used to help the national nutrition plan, and start a new journey of the digital intelligence ladder strategy.



推行綠色低碳，打造行業標桿。我們堅持生態優先，積極參與國際ESG評級體系，強化ESG管理；響應國家「3060」雙碳目標，全面啓動雙碳項目，保持運營中單位碳排放強度低於行業平均水平。

Promoting green and low-carbon development and creating an industry benchmark. We insisted on ecological priority and actively participated in the international ESG rating system to strengthen ESG management. In response to the national “3060” dual-carbon target, we have fully launched dual-carbon projects and kept the carbon emission intensity per unit in operation lower than the industry average.

堅持共同富裕，守護員工幸福生活。我們視員工為重要財富，全面踐行讓牛人綻放的企業精神，創建了技術與管理的雙通道職業發展平台，加大員工培訓與發展的投入，持續推行員工幸福計劃，推進共同富裕，構建和諧的勞動關係，提升員工幸福感與歸屬感。

Adhering to the principle of common prosperity and enabling employees to live a happy life. We regard employees as important assets, and fully practice the enterprise spirit of "unleash our potentials". We have created a dual-channel career development platform for technology and management functions, increased investment in employee training and development and continued to implement employees' happiness plans to promote common prosperity, build harmonious labour relations and enhance employees' sense of happiness and belonging.

立足盡責擔當，堅守良心奶企職責。我們始終堅持「正直立本，誠信立事」的核心價值觀，勇於擔當，通過積極助力公益事業、持續助推慈善事業，維護群眾利益，增進民生福祉，發揮企業力量。

Being responsible and sticking to the responsibilities of a conscientious dairy enterprise. We always adhere to the core values of “be honest and credible” and have the courage to take responsibility. By actively supporting public welfare undertakings and continuing to promote charitable undertakings, we safeguarded the interests of the masses, improved people’s livelihood and well-being, and gave full play to the power of the enterprise.

2022年，面對多重壓力和挑戰，我們多措並舉，踔厲奮發。我們將凝心聚力，群策群力，堅持高質量發展理念，堅持走規模化發展道路，堅持種養加一體化發展戰略，堅持可持續發展理念，攜手各利益相關方，為奶業的振興，再寫新篇章，再創新佳績。

In 2022, we worked hard in the face of multiple pressures and challenges. We will work together and adhere to the concept of high-quality development, the path of large-scale development, the development strategy of “integration of planting, breeding and processing” and the concept of sustainable development. We will join hands with all stakeholders to write a new chapter and make new achievements for the revitalization of the dairy industry.

走進現代牧業

About Modern Dairy

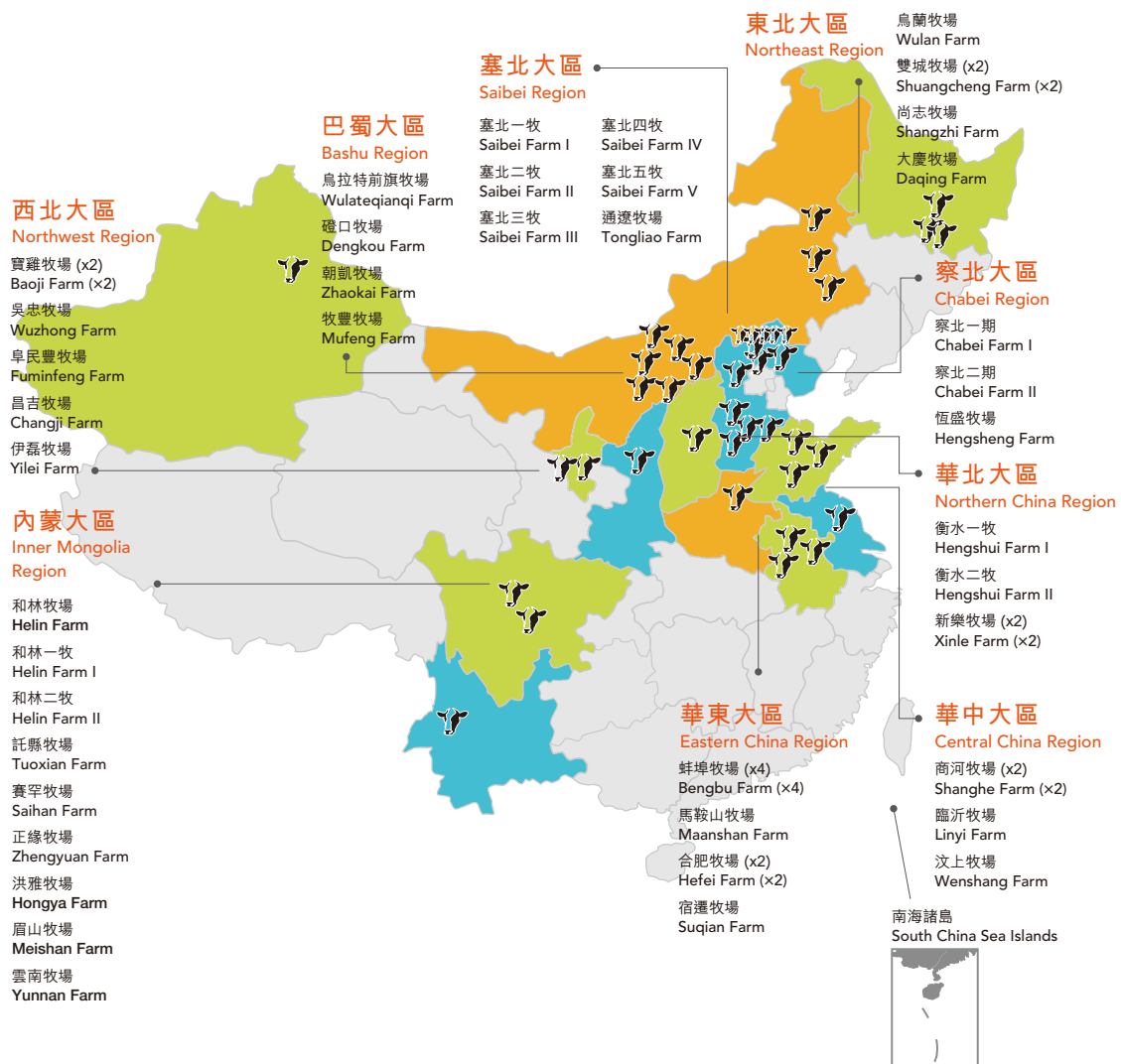
現代牧業成立於2005年9月，是一家專門從事奶牛養殖和牛奶生產的企業，總部位於安徽省馬鞍山。2010年11月26日在香港聯交所成功上市，是全球第一家以奶牛養殖資源上市的企業。依托全球首創的「牧草種植、奶牛養殖、牛奶加工零距離一體化」全產業鏈生產模式，現代牧業已經發展成為規模化奶牛養殖行業的領軍企業、高品質原奶供應商及優質乳加工製造者。

Founded in September 2005, Modern Dairy specializes in cow breeding and milk production, with headquarters in Ma'anshan City, Anhui Province. It was successfully listed on the Hong Kong Stock Exchange on 26 November 2010 and has become the first listed enterprise focusing on dairy cow breeding in the world. Modern Dairy has developed into a leading company in the large-scale dairy farming industry, high-quality raw milk supplier and dairy processing manufacturer in China leveraging on the world's proprietary production model of "the zero-distance integration of forage planting, dairy farming and milk processing" that covers the whole industry chain.



我們以「創建世界最先進的牧場，生產世界最優質的牛奶」的經營發展戰略為指導，長期堅持「專心、專業、專注」於中國乳業發展。在公司整體發展戰略規劃的部署下，截至報告期末，現代牧業在全國自有41個牧場公司，遍布全國14個省份和自治區。奶牛存欄超過40萬頭，日產高品質生乳7,000多噸。

Insisting on the “attention, professionalism, concentration” philosophy, the Company is committed to the development of China’s dairy industry under the guidance of the operation and development strategy of “building the world’s most advanced farms and producing the world’s best milk”. Relying on the overall development strategy and plan of the Company, as of the end of the reporting period, Modern Dairy had 41 dairy farming companies in 14 provinces and autonomous regions across the country with over 400,000 cows in total, and daily production of high-quality raw milk exceeded 7,000 tons.



企業文化全景圖

CORPORATE CULTURE PANORAMA



使命

Mission

牧育健康牛

Raise healthy cows,

守護每一滴好奶

safeguard each and every drop of milk

願景

Vision

佈局產業鏈 數智創新

Deploy the whole industry chain, innovate with digital intelligence,

做全球牧業引領者

and be a global dairy farming leader

核心價值觀

Core Values

1

安全健康第一
Safety and health come first

敬畏生命 棄漠視風險
健康防疫 棄麻痺大意
質量優先 絕不妥協
節能減碳 棄跑冒滴漏

1

Respect life and never neglect risks.
Fight the virus, be healthy, be cautious.
Quality comes first, never be
compromised.
Save energy, reduce carbon footprint and
waste.

2

高標準
執行
Execute with high
standards and efficiency

尊重科學 創新領先
主動擔當 說到做到
棄放空炮 等靠要
快速反應 注意細節

2

Respect science and lead innovation.
Be proactive and responsible, and be
true to our words.
Make concrete steps and be proactive.
Respond quickly and be attentive to
details.

3

讓牛人綻放
Unleash our potentials

敬用牛人 不論資排輩
重獎牛人 棄平均主義
善於賦能 彼此成就
棄只挑毛病 相互拆台

3

Value talents from all walks of life.
Reward talents based on merits.
Good at empowering and be successful
together.
Say no to bias and backstabbing.

4

誠信立事
正直立本
Be honest and credible

堅持原則 幹實事
棄逐利盲從 搞投機
公平公正 棄暗箱操作
用事實和數據說話

4

Uphold principles and be pragmatic.
Stop speculation and opportunism.
Be fair and open.
Speak with truth and data.

企業精神

Enterprise Spirit

天生要強 與自己較勁

Born to be strong and go beyond ourselves



企業事記 Milestones

- 2022年2月
February 2022
- 安徽省委副書記，省政府省長、黨組書記王清憲一行蒞臨現代牧業蚌埠牧場調研。
Wang Qingxian, Deputy Secretary of the Anhui Provincial Party Committee, Governor of the Anhui Provincial Government and Secretary of the Party Group of Anhui province visited Bengbu Farm of Modern Dairy for investigation.
- 2022年3月
March 2022
- 現代牧業發布二零二一全年業績，核心指標再創新高，盈利突破預期。
Modern Dairy announced its 2021 annual results, with core indicators hitting new highs and profits exceeding expectations.
- 2022年4月
April 2022
- 正式加入聯合國全球契約組織(UNGC)。
We officially joined the United Nations Global Compact (UNGC).
 - 在參與標普全球企業可持續發展評估(CSA)的問卷填報中，總分大幅提升，超過全球341家同行企業的平均分。
In participating in the S&P Global Corporate Sustainability Assessment (CSA) questionnaire, our total score has increased significantly, exceeding the average score of 341 peer companies around the world.
 - 先後啓動山西現代鑫源牧業產業園5萬頭奶牛養殖戰略合作項目、烏蘭浩特市3萬頭標準化牧場建設項目和突泉縣萬頭奶牛標準化牧場建設項目。
We have successively launched the 50,000-dairy-cow breeding strategic cooperation project in Shanxi Modern Xinyuan Animal Husbandry Industrial Park, the 30,000-dairy-cow standardized farm construction project in Ulanhot and the 10,000-dairy-cow standardized farm construction project in Tuquan County.
- 2022年5月
May 2022
- 正式發布全新企業文化。
We officially released a new set of the corporate culture.
 - 公告收購愛養牛。
We announced the acquisition of Aiyangniu.
- 2022年6月
June 2022
- 獲得標普BBB評級，評級展望為穩定。
We had a BBB rating from Standard & Poor's with a stable outlook.

2022年7月
July 2022

- 與首農畜牧共同成立合資公司蒙元種業科技(北京)有限公司。
We jointly established a joint venture Mengyuan Breeding Technology (Beijing) Co. Ltd. with Sunlon Livestock.
- 現代草業註冊的自有品牌產品成功上市。
The self-owned brand products registered by Modern Grass were successfully launched.
- 現代牧業(五河)有限公司在食品安全、動物福利、環境保護、工人的健康、安全和福利方面符合良好農業規範國家標準，獲得中國良好農業規範認證證書(GAP)。
Modern Dairy (Wuhe) Co., Ltd. complies with national standards of good agricultural practices in terms of food safety, animal welfare, environmental protection, workers' health, safety and welfare, and has obtained the China Good Agricultural Practice Certificate (GAP).

2022年8月
August 2022

- 現代牧業發布二零二二年中期業績，經調整淨利潤同比增長49%。
Modern Dairy released its 2022 interim results, and its adjusted net profit increased by 49% year-on-year.

2022年9月
September 2022

- 參加第十三屆中國奶業大會，與國家奶牛產業技術體系就低碳養殖達成戰略合作，並正式發布2022年現代牧業優質乳工程評價成果白皮書。
We participated in the 13th China Dairy Industry Conference, reached strategic cooperation with the National Dairy Industry Technology System on low-carbon farming, and officially released the "2022 High-quality Milk Project Evaluation Results White Paper of Modern Dairy".

2022年11月
November 2022

- 參加聯合國氣候變化大會第27次會議。
We participated in the 27th meeting of the United Nations Climate Change Conference.

2022年12月
December 2022

- 位列全球FAIRR蛋白質生產商指數中國企業排名第一。
We were ranked first among Chinese companies in the global FAIRR protein producer index.
- 首次填報CDP氣候問卷獲得B-評級，優於全球及行業平均水平。
We received a B- rating in the CDP climate questionnaire for the first time, which was better than the global average and the industry average.
- 截至12月，正緣牧場、烏拉特前旗牧場、大慶一牧、大慶二牧、昌吉牧場正式進牛。
As of December, Zhengyuan Farm, Wulateqianqi Farm, Daqing Farm I, Daqing Farm II and Changji Farm officially brought in cows.



企業榮譽

Enterprise Achievements

- 2022年2月
February 2022
- 首獲《財資》雜誌3A國家獎。
We received the 3A National Award from The Asset magazine for the first time.
- 2022年4月
April 2022
- 連續9年榮獲世界食品品質評鑒大會金獎。
We were awarded the Gold Prize of Monde Selection for the ninth consecutive year.
- 2022年6月
June 2022
- 榮膺《機構投資者》2022年度最佳ESG、最佳IR團隊、最佳CEO、最佳CFO、最佳IR專業人員五項殊榮。
We were honoured with five awards for 2022 from the Institutional Investor magazine, including Best ESG Award, Best IR Team Award, Best CEO Award, Best CFO Award and Best IR Professional Award.
- 2022年9月
September 2022
- 榮膺中國奶業協會「優秀乳品加工企業」稱號，總裁孫玉剛榮獲「優秀奶業工作者」。
We were awarded the "Excellent Dairy Processing Enterprise" award by the Dairy Association of China, and Mr. Sun Yugang, CEO of the Group, was awarded the "Excellent Dairy Worker" award.
 - 入選中國奶業數字化轉型卓越案例集。
We were selected into the list of excellent cases of digital transformation in China's dairy industry.
 - 榮獲安徽省農業農村廳2022年「皖美農品」區域企業品牌。
We won the 2022 "Anhui Perfect Agricultural Products (皖美農品)" regional enterprise brand issued by the Department of Agriculture and Rural Affairs of Anhui Province.
- 2022年11月
November 2022
- 榮膺國家奶業科技創新聯盟「優質乳工程助力國民營養計劃功臣企業獎」，總裁孫玉剛榮獲「優質乳工程助力國民營養計劃功臣獎」。
We were awarded the "Quality Milk Project for National Nutrition Program", and Mr. Sun Yugang, CEO of the Group, was presented the "Quality Milk Project for National Nutrition Program Award of Merit" as well.
 - 榮獲安徽省農業農村廳2022年省級數字農業工廠。
We won the 2022 "Provincial Digital Agricultural Factory" award from the Department of Agriculture and Rural Affairs of Anhui Province.
- 2022年12月
December 2022
- 再度蟬聯「年度最具成長力新銳品牌」，孫玉剛總裁被授予「最佳操盤手」獎項。
We were awarded the "Most Growing New Brand of the Year" for consecutive years, and Sun Yugang, the CEO of the Group, won the "Best Trader" award.
 - 榮獲2022中國農業企業500強。
We were selected as one of the top 500 Chinese agricultural enterprises in 2022.

構建責任管理

Responsible Management

本公司持續完善公司治理結構，推進公司治理的規範性和有效性；建立健全安全防線，優化內部監督體系，落實全面風險管理；提升可持續管理水平，開創自身高質量發展；堅守商業道德，確保廉潔運營；加強信息披露水平和透明度，強化投資者關係，攜手共同發展。

The Company keeps improving the corporate governance structure to promote the standardization and effectiveness of corporate governance, and also establishes a sound security defense line and optimizes the internal supervision system to implement comprehensive risk management. The Company improves the level of sustainable management to create its own high-quality development, adheres to business ethics to ensure clean operation, strengthens the level and transparency of information disclosure and strengthens investor relations to work together for common development.

公司治理

Corporate Governance

現代牧業不斷提升公司治理水平，建立健全配套制度體系，切實發揮各層級職能，讓完善的公司治理成為企業可持續發展的基礎保障和動力。

Modern Dairy continuously improves the level of corporate governance, establishes and perfects the supporting system, and effectively plays the functions of all levels, so that perfect corporate governance can become the basic guarantee and driving force for the sustainable development of the Company.

- 完善治理結構

Improving Governance Structure

現代牧業遵循《中華人民共和國公司法》、《香港聯合交易所有限公司證券上市規則》（《香港上市規則》）附錄十四《企業管治守則》等國家法律法規及各項監管規定，不斷完善企業制度和管理體系，對《合資經營企業章程》及細則和各專業委員會議事規則等進行全面系統梳理。

By complying with the Company Law of the People's Republic of China, the Corporate Governance Code as set out in Appendix 14 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "HK Listing Rules") and other national laws and regulations and various regulatory requirements, Modern Dairy has been continuously improving the corporate system and management system, and comprehensively and systematically sorted out the Articles of Association of the Joint Venture, the articles of association and the rules of procedure of various professional committees.

設置董事會為集團公司的最高權力機構和決策機構，依法行使職權，對公司的管理負有最終責任；董事會與高級管理層共同形成權力機構、決策機構、監督機構；與經理層之間權責分明、各司其職、有效制衡、科學決策，建立協調運作的法人治理結構。

The Board of Directors is set up as the highest authority and decision-making body of the Group to exercise its powers according to law and bears ultimate responsibility for the management of the Company. The Board of Directors and the senior management jointly form the authority, decision-making and supervisory institutions, and the Board of Directors and the management have clearly defined powers and responsibilities, each of which performs its own duties, have effective checks and balances and makes scientific decisions, establishing a corporate governance structure that coordinates operations.





截至2022年末，現代牧業共有九名董事，其中，執行董事兩名，非執行董事四名，獨立非執行董事三名。本年度共召開股東週年大會一次，董事會會議四次，全體董事年內積極參會、勤勉履職，董事會及其董事委員會會議的平均出席率為100%。

As of the end of 2022, Modern Dairy had a total of nine directors, including two executive directors, four non-executive directors and three independent non-executive directors. During the year, one annual general meeting of shareholders and four board meetings were held. All directors actively participated in the meetings and performed their duties diligently during the year. The average attendance rate of meetings of the Board of Directors and its board committees was 100%.

- ### 合理選聘董事

Reasonable Selection of Directors

現代牧業依據企業管治守則及組織章程大綱及細則對董事進行提名和選舉，以保持獨立性為原則。我們關注成員組成的多元化以及成員高水準的專業經驗和能力，確保董事會在研究和審議重大事項時做出獨立判斷和科學決策。

Modern Dairy nominates and elects directors in accordance with the Corporate Governance Code and the memorandum and articles of association, with the principle of maintaining independence. We pay attention to the diversity of members and the high level of professional experience and ability of members to ensure that the Board of Directors makes independent judgments and scientific decisions when researching and deliberating major issues.

- **董事獨立性：**全體董事(包括獨立非執行董事)均須每三年輪值退任一次。各董事已與本公司訂立為期三年的委任函。根據章程細則第17.18條，董事須於本公司各屆股東週年大會輪值退任及重新選定。

Directors' independence: All directors (including independent non-executive directors) are required to retire by rotation every three years. Each director has entered into a three-year appointment with the Company. Pursuant to Article 17.18 of the Articles of Association, directors are subject to retirement by rotation and re-election at each annual general meeting of the Company.

- **董事多元化：**董事會已採取多元化政策，在確定董事會成員組合時，從多方面考慮董事會成員多元化，包括但不限於性別、年齡、文化及教育背景、專業經驗、技能及知識。報告期內，董事會由九名董事組成，11%為女性。

Diversity of directors: The Board of Directors has adopted a diversity policy and will consider the diversity of board members from many aspects when determining the composition of board members, including but not limited to gender, age, cultural and educational background, professional experience, skills and knowledge. During the reporting period, the Board of Directors consisted of nine directors, 11% of whom were women.

- **董事專業性**：我們注重董事會成員的專業性。報告期內，董事會成員中兩名執行董事長期從事牧業管理工作，具有豐富的企業管理經驗；兩名非執行董事由在職大型乳企董事長、首席財務官或總經理擔任，具備豐富的行業知識和管理經驗；一名獨立非執行董事在畜牧領域具有豐富的經驗，對於國內外行業、技術發展具有深刻認識。

Directors' professionalism: We value the professionalism of our board members. During the reporting period, among the members of the Board of Directors, two executive directors have been engaged in animal husbandry management for a long time with rich experience in enterprise management, two non-executive directors serve as the chairman, chief financial officer or general manager of a large dairy company with rich industry knowledge and management experience, and an independent non-executive director has extensive experience in the livestock industry with a deep understanding of domestic and foreign industries and technology development.

風險管理 Risk Management

現代牧業堅持全面審慎的風險管理理念，以風險導向型審計為基礎，踐行風險識別先行、審計監督跟進的模式，聚焦集團核心業務，將風險管理與內部審計有效融合，為企業防範風險、改善運營、價值增值、護航戰略起到了重要作用。

Modern Dairy adheres to the concept of comprehensive and prudent risk management. Based on risk-oriented auditing, it implements the model of "risk identification followed by audit supervision", focuses on the core business of the Group, and effectively integrates risk management and internal auditing, playing an important role in preventing risks, improving operations, adding value and enforcing strategies for the Company.

公司不斷建立健全以董事會為主導的風險管理及內部監督體系，在《全面風險管理制度》及《內部審計管理制度》等管理規範的基礎上，建立《經濟責任審計管理制度》及《經營投資違規追責實施辦法》，同時針對業務特性進一步細化關鍵控制點，建立二級制度操作細則。

The Company continues to establish and improve the risk management and internal supervision system led by the Board of Directors. On the basis of the Comprehensive Risk Management System and the Internal Audit Management System and other management norms, the Company formulated the Economic Responsibility Audit Management System and the Implementation Measures for the Accountability for Business and Investment Violations, and at the same time further refined the key control points according to the business characteristics, and established the operation rules of the secondary system.

企業全面風險管理遵循COSO(Committee of Sponsoring Organizations of the Treadway Commission)五個主要風險管理框架，同時採用「三道防線」模式，明確三道防線管理職責，實現風險協同共管。三道防線與COSO框架相互補充強化，合力構築企業風險防禦系統。

Our comprehensive risk management follows the five-major-risk management framework of COSO (Committee of Sponsoring Organizations of the Treadway Commission), and adopts the "Three Lines of Defense" model to clarify the management responsibilities of the three lines of defense and achieve coordinated risk management. The three lines of defense and the COSO framework complement and strengthen each other, and work together to build an enterprise risk defense system.



- **風險識別**：通過梳理風險管理邊界，擴大識別範圍，將新業務單位納入識別與評估範圍，達到風險全面識別。
Risk identification: By sorting out the boundaries of risk management, expanding the scope of identification and including new business units in the scope of identification and evaluation, comprehensive risk identification is achieved.
- **風險評估**：採用三級評估方式，由業務單位先自行識別評估，風險管理部整合研判，同時結合風險調研問卷、高管一對一專項訪談等方式，精準評估輸出集團重大風險。
Risk evaluation: A three-level evaluation method is adopted. The business unit first identifies and evaluates itself, and the risk management department integrates research and judgment. At the same time, through risk survey questionnaires, one-on-one special interviews with senior executives, etc., accurately evaluate and identify the major risks of the Group.
- **風險應對**：基於評估結果部署制定並落實各風險項目應對策略，通過風險「雙責任主體」設定及重大風險分層分級管理，明確風險管理部門及落實風險主體責任。
Risk response: Based on the evaluation results, we will formulate and implement the response strategies for each risk project, and define the risk management department and implement the responsibility of the risk subject through the setting of “dual responsibility subjects” for risks and the hierarchical management of major risks.
- **風險監控**：公司對重點領域實施重點監控，開展風險專項排查及驗證。
Risk monitoring: The Company implements key monitoring on key areas, and carries out special risk investigation and verification.
- **定期匯報**：定期向管理層匯報風險監控排查情況。2022年公司未發生重大風險事件，實現風險可防可控。
Regular reporting: Regularly report the status of risk monitoring and investigation to the management. In 2022, no major risk events occurred in the Company, and all the risks were preventable and controllable.

為實現風險導向閉環管理，公司構建科學、有效的內部監督體系，內部審計作為監督體系的重要組成部分，依據《中華人民共和國審計法》、聯交所《企業管制守則》、《內部審計基本準則》及其他綱領性文件的指導，始終站在獨立客觀的角度評價經營活動及內部控制的適當性、合法性和有效性，以此促進組織目標的實現。2022年聚焦公司重要業務領域，深耕業務管理重要環節，改善業務流程合規運營，發揮審計前置管理職能，服務賦能業務。在開展常規審計基礎上，突破性開展管理專項審計，全流程、系統化梳理核心業務管理痛點，同時強抓審計問題整改，堅持查改並重方針，貫徹「三個不放過」原則(問題不整改堅決不放過、整改不徹底堅決不放過、責任不落實堅決不放過)，切實推動審計成果落地，助力業務合規運營。報告期內未發現重大內部控制缺陷，實現了審計價值增值。

In order to carry out risk-oriented closed-loop management, the Company has built a science-based and effective internal supervision system, and internal audit is an important part of the supervision system. Based on the guidance of the Audit Law of the People's Republic of China, the Corporate Governance Code of the Stock Exchange, the Basic Internal Auditing Standards and other programmatic documents, we always evaluate the appropriateness, legality and effectiveness of business activities and internal control from an independent and objective perspective, so as to promote the realization of organizational goals. In 2022, we focused on the Company's important businesses, strengthened important links in business management and improved compliance operations of business process, so as to play the pre-audit management function and serve to empower our business. In addition to regular audits, we creatively carried out special management audits and systematically sorted out the management sore points of core businesses throughout the process. We also focused on the rectification of audit issues and adhered to the principle of "resolute rectification of problems and implementation of responsibilities", so as to effectively promote the implementation of audit results and facilitate compliance operations. We identified no deficiencies in the internal control during the reporting period and realized the appreciation of audit value.



可持續發展管理

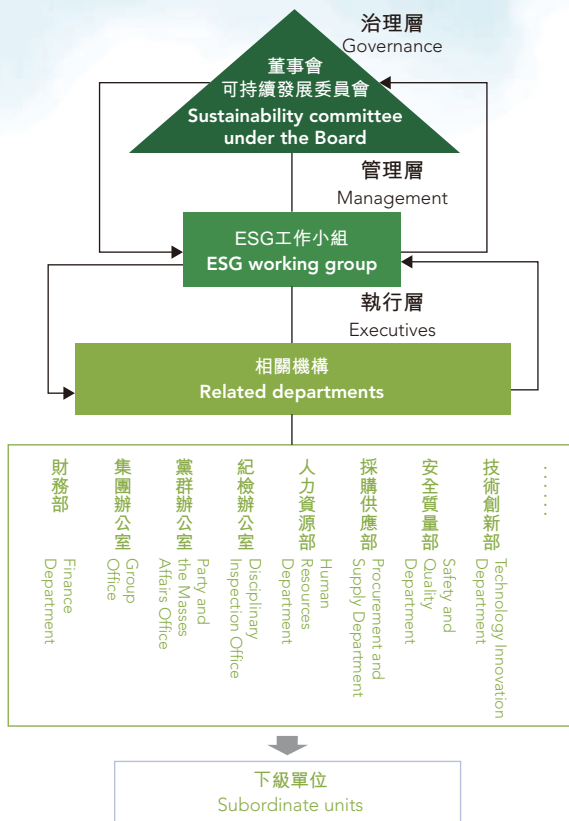
Sustainable Development Management

- **董事會聲明**
Board Statement

本公司嚴格遵循《上市公司治理準則》、香港聯合交易所「上市規則」附錄27《環境、社會及管治報告指引》等相關要求，公司董事會高度重視環境、社會及管治相關工作，並對相關策略及匯報負責，包括評價及判定環境、社會及管治風險，確保公司設立有效的風險管理和內部控制系統，對ESG問題的重要性進行最終評定及判定，定期檢討公司ESG表現，並審批公司ESG報告內的披露數據。本報告亦經過董事會審閱發布。

The Company strictly complies with the relevant requirements such as the Corporate Governance Guidelines for Listed Companies and the Environmental, Social and Governance Reporting Guide in Appendix 27 to the Listing Rules of the Hong Kong Stock Exchange. The Board of Directors of the Company attaches great importance to environmental, social and governance-related work, and is responsible for related strategies and reports, including evaluating and identifying environmental, social and governance risks, to ensure that the Company has established effective risk management and internal control systems. It conducts final assessments and identifications of the materiality of ESG issues, regularly reviews the Company's ESG performance, and approves the disclosures in the Company's ESG reports. This report has also been reviewed and released by the Board of Directors.

• 可持續發展管治架構
Sustainability Governance Framework



可持續發展委員會負責制定「雙碳戰略」，ESG 政策及相應舉措，持續識別並監控環境、社會及管治風險與機遇，定期監督 ESG 相關工作。

The Sustainability Committee is responsible for formulating the “Dual Carbon Strategy”, ESG policies and corresponding measures, continuously identifies and monitors environmental, social and governance risks and opportunities, and regularly supervises ESG-related work.

在可持續發展委員會的授權下，公司建立環境、社會及管治工作小組，小組成員涉及多個相關部門及附屬公司，支持董事會做出的 ESG 相關決策，負責協調各部門開展日常 ESG 工作，如數據收集、信息報送等信息披露、跟進 ESG 項目進度等工作落實情況，及時督促糾正偏離行動。

Under the authorization of the Sustainable Development Committee, the Company has established an environmental, social and governance working group with members from various relevant departments and subsidiaries. The working group supports ESG-related decisions made by the Board of Directors, and is responsible for coordinating the daily ESG work of various departments (such as data collection, information reporting and other information disclosure work) and supervising its implementation and timely urging actions to correct deviations.

各部門根據 ESG 工作小組的安排，落地執行 ESG 相關項目，提供 ESG 相關數據；定期匯報 ESG 項目進展，及時反饋執行過程中出現的問題。

According to the arrangement of the ESG working group, all departments implement ESG-related projects, provide ESG-related data and regularly report the progress of ESG projects, and provide timely feedback on problems that arise during the implementation process.

公司董事會作為ESG項目最終責任機構，制定「五年戰略規劃」、減碳戰略、ESG政策及相應舉措，持續識別並監控環境、社會及管治風險與機遇，定期檢討調整ESG相關工作。

As the ultimately responsible organ of ESG projects, the Board of Directors of the Company has formulated a “five-year strategic plan”, carbon reduction strategy, ESG policy and corresponding measures, continuously identified and monitored environmental, social and governance risks and opportunities, and regularly reviewed and adjusted ESG-related work.



在董事會授權下，公司建立環境、社會及管治委員會，支持董事會做出的ESG相關決策。委員會成員涉及多個相關部門及附屬公司，負責協調各部門開展日常ESG工作，並監督落實情況，及時督促糾正偏離行動。

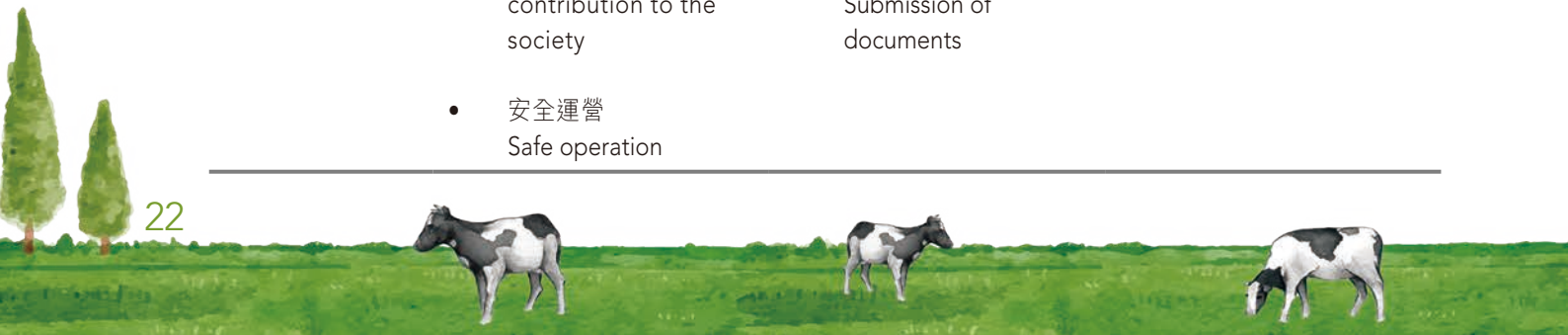
Under the authorization of the Board of Directors, the Company has established an environmental, social and governance committee with members from various relevant departments and subsidiaries. The committee supports ESG-related decisions made by the Board of Directors, and is responsible for coordinating the daily ESG work of various departments and supervising its implementation and timely urging corrective actions to correct deviations.

公司根據聯交所ESG指引，參考GRI《可持續發展報告標準》，逐步完善ESG指標體系，將關鍵指標作為可持續發展工作重心，明確責任分工，優化管理架構，穩健可持續發展。

In accordance with the HK Stock Exchange ESG Guide and with reference to the GRI Sustainability Reporting Standards, the Company has gradually improved its ESG indicator system. We regard key indicators as the focus of sustainable development, clarify the division of responsibilities, and optimize the management structure to achieve stable and sustainable development.

• 利益相關方溝通
Stakeholders Communication

利益相關方 Stakeholders	期望與訴求 Expectations and Demands	溝通方式 Communication Mode	我們的回應 Our Response
股東／投資者 Shareholders/ Investors	<ul style="list-style-type: none"> 保障股東權益 Safeguard the rights and interests of shareholders 優異的業績 Outstanding performance 持續穩定增長的投資回報 Sustained and steady increase of return on investment 廉潔透明的運營 Honest and transparent operation 	<ul style="list-style-type: none"> 股東大會 General meeting 定期信息披露 Regular information disclosure 聯交所／公司網站 Websites of the Stock Exchange/Company 投資者會議及路演 Investor conference and roadshow 	<ul style="list-style-type: none"> 透明公開的信息披露 Transparent and open information disclosure 強化投資管理 Enhance investment management 加強企業風險管理 Strengthening enterprise risk management 持續提高價值創造能力 Continuously improve the ability to create value
政府／監管機構 Government/ regulatory agency	<ul style="list-style-type: none"> 合規經營 Compliance 嚴格的內部控制和風險管理 Strict internal control and risk management 促進經濟發展 Promote economic development 突出社會貢獻 Extraordinary contribution to the society 安全運營 Safe operation 	<ul style="list-style-type: none"> 信息報送 Information submission 合規報告 Compliance report 參與會議／研討會 Attending meeting/ seminar 特別查詢／檢查 Special inquiry/ inspection 遞交文件 Submission of documents 	<ul style="list-style-type: none"> 加強合規運營 Strengthen compliance operation 加強安全管理 Strengthen safety management 依法納稅 Pay taxes according to law



利益相關方 Stakeholders	期望與訴求 Expectations and Demands	溝通方式 Communication Mode	我們的回應 Our Response
消費者 Consumers	<ul style="list-style-type: none"> 個人隱私保護 Personal privacy protection 食品安全 Food safety 優質服務體驗 Superior service experience 營養健康多樣的產品選擇 Availability of nutrient, healthy, and diversified products 	<ul style="list-style-type: none"> 公司官網 Official website of the Company 客服熱線 Customer service hotline 客戶滿意度調查 Customer satisfaction survey 	<ul style="list-style-type: none"> 保障消費者權益 Safeguard consumers' rights 保障產品質量 Product quality guarantee 生產公開透明 Open and transparent production
員工 Employees	<ul style="list-style-type: none"> 保障員工權利及權益 Safeguard the rights and interests of employees 職業健康及安全 Occupational health and safety 改善員工福利 Improve employee benefits 平等就業機會及多元化發展 Equal employment opportunities and diversified developments 	<ul style="list-style-type: none"> 勞動合同 Employment contract 信息平台 Information platform 諮詢電話與郵件 Hotline and email 內部月刊 Internal monthly magazine 投訴平台線上線下培訓交流 Online and offline training and exchange of complaint platform 	<ul style="list-style-type: none"> 堅持公平招聘 Insist on equal recruitment 開展員工培訓 Carry out training for employees 優化職業發展渠道 Optimize career development channel 開展員工活動 Carry out employee activities 充分聽取員工意見 Fully listen to all opinions of the employees



利益相關方 Stakeholders	期望與訴求 Expectations and Demands	溝通方式 Communication Mode	我們的回應 Our Response
供貨商／合作夥伴 Supplier/partner	<ul style="list-style-type: none"> • 建立長期業務關係 Establish a long-term business relationship • 公平採購、誠信履約 Fair procurement and honest performance • 產品質量保證 Product quality assurance 	<ul style="list-style-type: none"> • 供應商評估 Evaluation of suppliers • 實地考察 On-site visit • 定期供應商會議 Regular supplier meeting 	<ul style="list-style-type: none"> • 嚴格供應鏈管理 Strict supply chain management • 嚴選牧場 Strict selection of farm • 堅持公平公開的採購 Insist on fair and open procurement
環境 Environment	<ul style="list-style-type: none"> • 堅持綠色運營 Insist on the green operation • 最小化環境影響 Minimize environmental impact • 應對氣候變化 Address climate change • 保護生態多樣性 Protect biodiversity 	<ul style="list-style-type: none"> • 環境檢查 Environment inspection • 環境信息披露 Environment information disclosure • 倡導環保理念 Advocate the idea of environmental protection • 堅持可持續發展 Insist on sustainable development 	<ul style="list-style-type: none"> • 加強環境及生態保護 Strengthen environmental and ecological protection • 堅持可持續發展道路 Insist on the path of sustainable development • 打造循環智能牧場 Create circular and smart farms • 創新農業循環模式 Innovate the agricultural recycling model

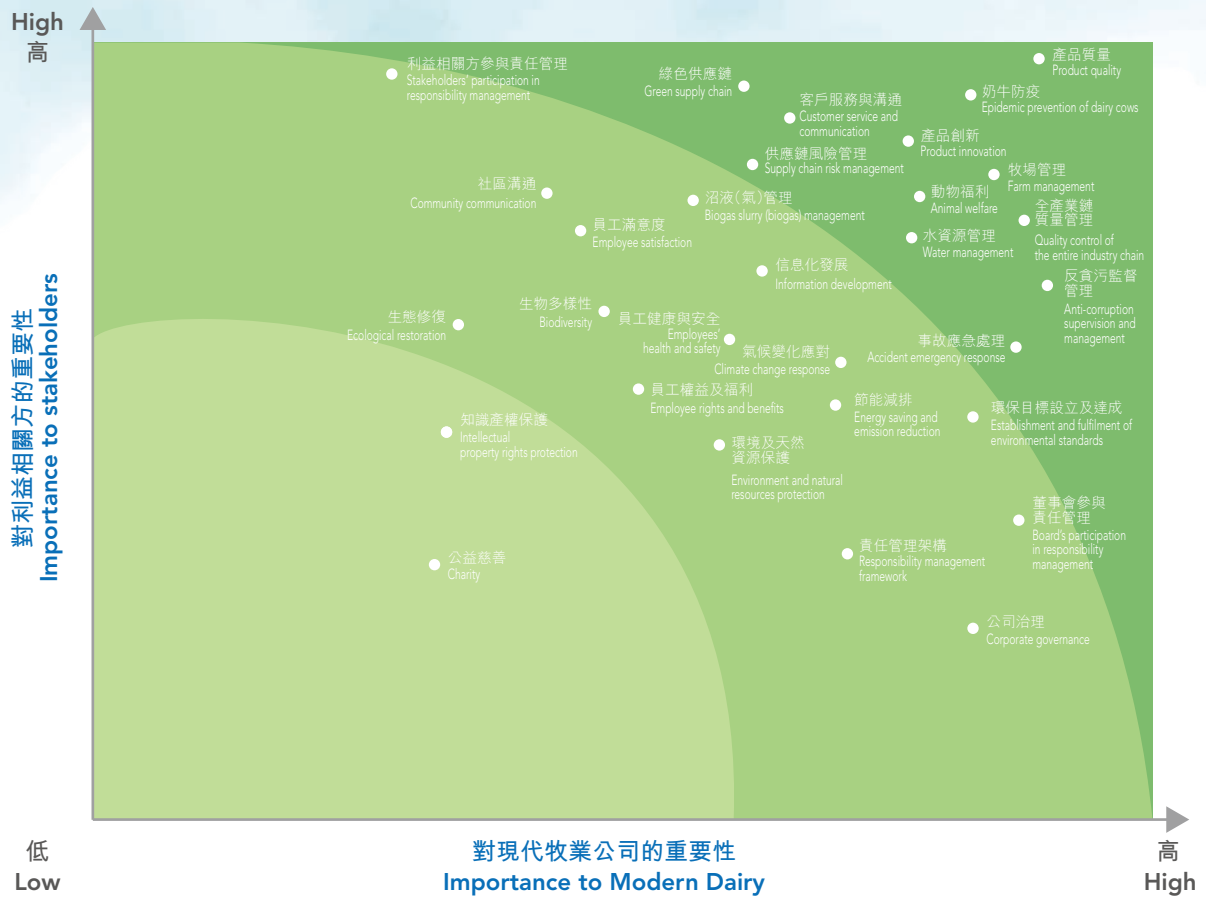


利益相關方 Stakeholders	期望與訴求 Expectations and Demands	溝通方式 Communication Mode	我們的回應 Our Response
社區 Community	<ul style="list-style-type: none"> 開展社會公益 Carry out public benefit activities 促進社區發展 Promote community development 	<ul style="list-style-type: none"> 了解社區需求 Understand community needs 制定社區服務規劃 Formulate community service plan 	<ul style="list-style-type: none"> 開展社會公益活動 Carry out public benefit activities 開展社區服務 Carry out community service 促進本地就業 Promote local employment 馳援疫區 Aid to the epidemic areas

- 實質性議題識別**
Identification of Material Topics

公司結合內外部利益相關方期望以及業務特徵，識別、評估與總結實質性議題，並下發至利益相關方進行問卷調研。同時，結合問卷結果對與我們業務相關且重要的ESG事宜進行分析與驗證後，篩選並形成實質性議題矩陣，作為本公司ESG關注及披露依據。

Based on internal and external stakeholders' expectations and business characteristics, the Company identifies, evaluates and summarizes material topics, and sends them to stakeholders for questionnaire survey. At the same time, based on the results of the questionnaire and the analysis and verification of important ESG issues related to our business, we screen and form a matrix of material topics as the basis for the Company's ESG concerns and disclosures.



- 回應聯合國可持續發展目標(UN SDGs)
Responding to the UN Sustainable Development Goals



現代牧業多年來持續幫助貧困員工和營運地週邊社區的貧困家庭脫困，幫助改善貧困居民生活，在節日為貧困居民送上生活慰問品和祝福。

Over the years, Modern Dairy has continued to help poor employees and poor families in the surrounding communities where it operates, help improve the lives of poor residents, and send daily necessities and blessings to poor residents on festivals.



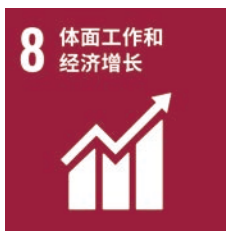
現代牧業致力於提供優質健康的原奶，打造優質的牛乳工程。

Modern Dairy is committed to providing high-quality and healthy raw milk and creating high-quality milk projects.



現代牧業杜絕性別歧視，支持男女平等，並保障女性員工合法權益和福利。

Modern Dairy eliminates gender discrimination, supports gender equality, and protects the legal rights and benefits of female employees.



現代牧業為營運地週邊地區提供了大量就業崗位，帶動當地農民增收；嚴禁強制勞動、僱傭童工，為員工提供具有競爭力的薪酬福利體系，不斷加強員工工作生活的後勤保障。

Modern Dairy has provided a large number of jobs in the surrounding areas of the operation sites, driving the income of local farmers to increase; and strictly prohibits forced labour and child labour, provides employees with a competitive salary and welfare system, and continuously strengthens the logistical guarantee of employees' work and life.



12 负责任
消费和生产



現代牧業堅持發展「飼草種植 - 奶牛養殖 - 糞污處理 - 沼肥還田(沼氣發電) - 飼草種植」的生態農業循環經濟，在糞污處理模式上走出了一條環保、生態、效益相結合的創新之路，改善了當地的生態環境和生物多樣性，提高了調節氣候變化的能力。

Modern Dairy insists on developing an eco-agricultural economy featuring the cycle of "Forage Planting - Cow Breeding - Manure Treatment - Soil Fertilization with Organic Waste (power generation with biogas) - Forage Planting", and has successfully paved an innovative way integrating environmental protection, eco-friendliness and profitability in manure treatment. As a result, the local ecological environment and biodiversity have been improved, and the ability to regulate climate change has been enhanced.

13 气候行动



15 陆地生物



16 和平、正义与
强大机构



現代牧業不斷完善企業管治，加強反腐敗建設，致力建立高效透明的治理體系。Modern Dairy continuously improves corporate governance, strengthens anti-corruption construction, and is committed to establishing an efficient and transparent governance system.



- **商業道德與反貪腐**
Business Ethics and Anti-Corruption

本公司嚴格遵守《聯合國反腐敗公約》、《反賄賂商業原則》、《中華人民共和國刑法》、《中華人民共和國公司法》等國際倡議和法律法規的要求，積極建立健全內控機制，持續開展商業道德制度與體系構建工作。2022年公司發布了《中國現代牧業道德準則》，不定期開展商業道德的合規及審計監督，暢通舉報渠道，嚴查違法行為。公開承諾攜手相關方共同踐行道德準則，從員工權益、合法經營、供應鏈管理、生態保護、動物福利等方面規範行為，維護正常的生產和工作秩序，保證公司有效運營、長久發展。

The Company strictly abides by international initiatives and laws and regulations such as the United Nations Convention Against Corruption, the Commercial Principles Against Bribery, the Criminal Law of the People's Republic of China and the Company Law of the People's Republic of China, actively establishes and improves the internal control mechanism, and continuously carries out the construction of business ethics systems. In 2022, the Company released the Code of Ethics of China Modern Dairy, irregularly carried out business ethics compliance and audit supervision, unblocked the reporting channels and strictly investigated illegal activities. In the Code of Ethics, the Company undertakes to work with relevant parties to implement the code of ethics, standardize behaviors in terms of employees' rights and interests, legal business, supply chain management, ecological protection and animal welfare, and maintain normal production and work order, so as to ensure effective operation and long-term development of the Company.

現代牧業高度重視廉政建設及反腐敗工作，始終保持對懲治違紀違規問題的高壓態勢，積極構建「不敢腐、不能腐、不想腐」體系，內部編製《現代牧業紀律處理處分管理條例》、《信訪舉報和問題線索處置管理規定》、《紀律處理處分流程審批辦法》、《關於任用親屬和防止利益衝突的規定》、《信訪舉報澄清工作規定》等16份廉潔制度。集團紀檢辦公室貫徹落實上級紀委、同級黨委關於反腐敗工作的各項要求，通過加強廉潔培訓、暢通舉報渠道、嚴肅查辦案件、開展監督檢查、持續加強全體員工的廉潔意識，營造風清氣正的運營氛圍，護航企業高質量發展。

Modern Dairy attaches great importance to integrity and anti-corruption. The Company has always maintained a high-pressure stance against violations of disciplines and regulations, and actively built a system of "don't dare to corrupt, cannot corrupt, and do not want to corrupt" by developing 16 systems related to integrity including the Regulations on Disciplinary Actions of Modern Dairy, the Regulations on the Management of Letters and Visits and Disposal of Problem Clues, the Approval Measures for Disciplinary Action Procedures, the Regulations on Appointing Relatives and Preventing Conflicts of Interest and the Regulations on the Clarification of Letters and Visits and Reports. The Group's Disciplinary Inspection Office is responsible for implementing the requirements of the higher-level disciplinary committees and the Party committees at the same level on anti-corruption work, and by strengthening integrity training, unblocking reporting channels, seriously investigating and handling cases, conducting supervision and inspection and continuously strengthening the integrity awareness of all employees, we will create a clean and upright operating atmosphere and ensure the high-quality development of the Company.

- **築牢全員思想防線。**公司以「教育在先，警示在先，預防在前」的原則，增強管理人員拒腐防變能力，報告期內開展管理人員任職廉潔談話並簽訂廉潔責任書840餘份；對職能業務部門、問題多發牧場及新建牧場開展廉潔培訓，並推動基層黨組織開展廉潔培訓；強化反腐敗培訓，不斷提高員工廉潔意識，公司優化線上、線下多種培訓模式，培訓範圍覆蓋公司全員。2022年，累計開展培訓34場，實現全員覆蓋。此外，公司強化董事及高管人員的反腐倡廉教育，報告期內，組織董事及高管人員參加集團反腐敗宣傳教育7次。

Raise the anti-corruption awareness of all employees. Based on the principle of "education, warning and prevention come first", the Company enhances the ability of management personnel to resist corruption. During the reporting period, we carried out integrity talks with management personnel and signed more than 840 integrity responsibility letters, carried out integrity training for functional business departments, problem-prone farms and newly-built farms, and promoted grassroots party organizations to carry out integrity training. The Company insists on strengthening anti-corruption training and continuously improves employees' integrity awareness. The Company optimizes various online and offline training modes, and the training covers all employees of the Company. In 2022, a total of 34 training sessions were carried out, covering all employees of the Company. In addition, the Company strengthened anti-corruption education for directors and senior executives. During the reporting period, the Company organized directors and senior executives to participate in the Group's anti-corruption publicity and education 7 times.

- **嚴查違紀違規案件。**公司紀檢辦公室對收到的違規違紀案件線索進行全方位核查，對於核查屬實情況，嚴格按照制度規範嚴肅處理問責相關人員，積極挽回公司經濟損失，必要時移送司法機關，並將相關違規違紀情況在集團內通報，以示警戒。2022年，公司紀檢辦公室共收到問題線索26件，處理違規違紀人員78人，涉及貪污腐敗等司法案件0件。共挽回經濟損失379.1萬元。

Strictly investigate violations of discipline and regulations. The Disciplinary Inspection Office of the Company conducts an all-round verification of the clues received for violations of laws and disciplines. If the situation is true after verification, we strictly follow the rules and regulations to seriously deal with the relevant personnel to actively restore the Company's economic losses, transfer it to the judicial authorities if necessary, and report the relevant violations of laws and disciplines within the Group as a warning. In 2022, the Disciplinary Inspection Office of the Company received a total of 26 violation clues, and found 78 employees who violated the rules and regulations with no judicial cases involving corruption. A total of economic losses of RMB3.791 million were recovered.



- **開展專項監督檢查。**結合生產運營，開展重點領域的專項監督檢查工作，2022年仍以青貯收購監督檢查為中心，在青貯領域腐敗的治理的基礎上增加流程規範建設，協助牧場高質量完成青貯收購工作。我們在該領域收集腐敗問題線索，努力消解腐敗存量，遏制該領域問題的增量。擴大沼液沼渣烘乾業務、備品備件業務的檢查，加強合作過程中的合規性、促進集團降本增效，堵塞制度漏洞，推動整改問題，促進生產經營發展。專項監督挽回直接經濟損失85.44萬元，間接經濟損失1,073.54萬元。

Carry out special supervision and inspection. We carry out special supervision and inspection in key areas based on the situation of production and operation. In 2022, we still focused on the supervision and inspection of silage purchases, and increased the efforts in the setting up of standardized processes on the basis of the governance of corruption in the silage field to assist farms in completing silage purchases with high quality. We collected clues on corruption in this field, striving to eliminate existing corruption and curb the increase of problems in this field. We expanded the inspection of biogas slurry and biogas residue drying business and spare parts business, strengthened compliance in the cooperation process and promoted the cost reduction and efficiency increase of the Group. We also plugged the loopholes in the system and promoted the rectification of problems to promote the development of production and operation. We recovered direct economic losses of RMB854,400 and indirect economic losses of RMB10.7354 million through special supervision.

- **強化廉潔宣傳工作。**開展廉潔宣傳工作，在集團層面開展「正直立本揚正氣，誠信廉潔助生產」為主題的誠信月活動，通過多種方式讓廉潔文化深入人心。重大節日下發廉潔提醒5次，實時報導黨的二十大精神、學習成果及誠信日廉潔宣傳27次。

Strengthen the publicity of integrity. We carried out integrity publicity, and organized "integrity month" activities at the group level with the theme of "uprightness and integrity to help production", and through various methods, we were trying to make the integrity culture take root among our employees. We issued five reminders on integrity on major festivals, and reported the spirits of the 20th National Congress of the Communist Party of China, learning achievements and 27 integrity promotions on the Honesty Day.

- **健全制度體系建設。**公司紀檢辦公室編製並下發現代牧業《紀律處理處分規定》、《信訪舉報和問題線索處置管理規定》、《紀律處理處分流程審批辦法》、《關於任用親屬和防止利益衝突的規定》、《信訪舉報澄清工作規定》等16份廉潔制度，推進完善制度體系建設。

Improve the construction of the institutional system. The Disciplinary Inspection Office of the Company compiled and issued 16 integrity systems, including the Regulations on Disciplinary Handling and Sanctions, the Regulations on the Management of Complaints and Reports and Disposal of Problem Clues, the Approval Measures for Disciplinary Handling and Sanction Procedures, the Regulations on Appointing Relatives and Preventing Conflicts of Interest and the Regulations on Clarification of Letters and Visits and Reports, to promote and improve the system construction.



- **暢通監督舉報渠道。**公司鼓勵內部互相監督，並加大對核心層、重點崗位的反腐力度。我們持續拓展信訪投訴渠道，如舉報電話、舉報郵箱、信件、網絡等，並在企業平台設置專門的舉報微信，各單位主動配合做好監督舉報途徑的暢通。

Unimpeded channels for supervision and reporting. The Company encourages internal mutual supervision, and intensifies anti-corruption efforts for core and key positions. We continue to expand complaint channels, such as reporting hotlines, reporting mailboxes, letters, the Internet, etc., and set up a special reporting WeChat on the enterprise platform, and all units actively cooperate to ensure the smooth flow of supervision and reporting channels.

- **完善舉報人保護機制。**公司建立舉報人保護機制，允許員工進行匿名舉報，嚴格保密舉報人信息，堅決杜絕打擊報復行為。對於打擊報復行為，公司將依照制度予以嚴肅處理，其中構成犯罪的，將移交司法機關處理。報告期內，未出現舉報人信息泄露及打擊報復情況。

Improve whistle-blower protection mechanism. The Company has established a whistle-blower protection mechanism, allowing employees to report anonymously, keeping the whistle-blower's information strictly confidential and resolutely putting an end to retaliation. For retaliation, the Company will deal with it seriously in accordance with the system, and if constituting a crime, the relevant case will be transferred to the judicial organ for handling. During the reporting period, there was no information leakage and retaliation against whistle-blowers.

- **完善供應商反腐機制。**公司高度重視供應商反貪腐，建立並完善《採購招標管理制度》，明確供應商資格審查標準及准入條件，規範招標流程，建立招標監督信息數據庫，定期通過採招平台發佈供應商黑名單信息。

Improve the supplier anti-corruption mechanism. The Company attaches great importance to supplier anti-corruption. It established and perfected the Procurement Bidding Management System to clarify the supplier qualification review standards and access conditions and standardize the bidding process, and has also established a bidding supervision information database and regularly releases supplier blacklist information through the procurement platform.



案例
Case study

樹立廉潔意識、開展反貪污培訓
Establish awareness of integrity and carry out anti-corruption training

- 現代牧業集團召開2022年黨風廉政建設和反腐敗工作會議暨警示教育大會，全面總結2021年黨風廉政建設工作，安排部署2022年重點工作任務。集團黨委、經營班子及各單位黨員、管理人員近800人參會。

The Modern Dairy Group held the 2022 Party Style and Integrity Construction and Anti-Corruption Work Conference and Warning Education Conference, at which, the 2021 party style and integrity construction work was comprehensively summarized, and key tasks for 2022 were arranged and deployed. Nearly 800 people from the Group's party committee, management team, party members and managers of various units attended the meeting.



- 為深入學習貫徹黨的二十大精神，加強對管理人員廉潔從業教育，引導管理人員牢固樹立廉潔意識，同時要求管理人員認真履行「一崗雙責」主體責任，加強對所管轄部門人員的黨風廉政建設和反腐敗具體工作監督執行，集團黨委、紀檢辦公室組織新任職、晉升、調整的總監級以上40名管理人員進行任職提醒談話。

In order to thoroughly study and implement the spirit of the 20th National Congress of the Communist Party of China, strengthen the education of honesty and professionalism for management personnel, and guide management personnel to firmly establish a sense of integrity while requesting management personnel to earnestly fulfill the main responsibility of "one post with two responsibilities" and strengthening the supervision and implementation of the party style and integrity construction and anti-corruption work of the personnel in the departments under their charge, the Group Party Committee and the Disciplinary Inspection Office conducted reminder talks with 40 managers above the director level who were newly appointed, promoted, or redesignated.



01



推動可持續運營
Promoting Sustainable Operations

1. 推動可持續運營

Promoting Sustainable Operations

現代牧業懷揣「布局產業鏈，數智創新，做全球牧業引領者」的偉大願景，致力打造更智慧、更綠色的生態農場，積極推進數智化管理，依靠信息化、智能化系統實現傳統牧場智慧轉型。公司持續推進雙碳項目，強化氣候風險管理，依托「種養加一體化」創新模式，運用節能降碳先進技術，實現綠色可持續發展。

With the great vision of “deploy the whole industry chain, innovate with digital intelligence, and be a global dairy farming leader”, Modern Dairy is committed to building smarter and greener ecological farms, actively promoting digital and intelligent management, and relying on information and intelligent systems to realize the intelligent transformation of traditional farms. The Company continues to promote the dual-carbon project, strengthens climate risk management, and relies on the innovative model of “integration of planting, breeding and processing” and advanced technologies for energy saving and carbon reduction to achieve green and sustainable development.

1.1 打造智慧牧場

Building Smart Farms

現代牧業作為數字化管理牧場的深入踐行者，一直將數智化建設放在企業發展的優先位置。2022年，公司進入數字化階梯戰略實施，從數字化、智能化到雲生態方面，加大自主研發投入，並且擴大外部合作，積極推進我國奶牛養殖的數字化進程。

As an in-depth practitioner of digital management of farms, Modern Dairy has always placed digital intelligence construction at the top of its corporate development. In 2022, the Company started the implementation of the digital ladder strategy, increased investment in independent research and development from digitalization, intelligence to cloud ecology, and expanded external cooperation to actively promote the digitalization of dairy farming in China.

2022

數字化轉型年

加快系統建設，
打破系統壁壘，
實現業務財務一體化

Year of Digital Transformation

Accelerate system construction,
break the system barrier to achieve
business and financial integration

2024

商業模式開拓年

基於雲養牛平台，
實現規模化養殖方案和
技術服務輸出

Year of Business Model Development

Rely on the Yunyangniu platform to
come up with large-scale breeding
solutions and technical service
output

2023

數字創新年

推廣智能傳感設備、
圖像識別等技術，
從經驗養牛到數字養牛

Year of Digital Intelligence Innovation

Promote intelligent sensing
equipment, image recognition and
other technologies to realize from
raising cattle based on experience to
raising cattle in a digital way



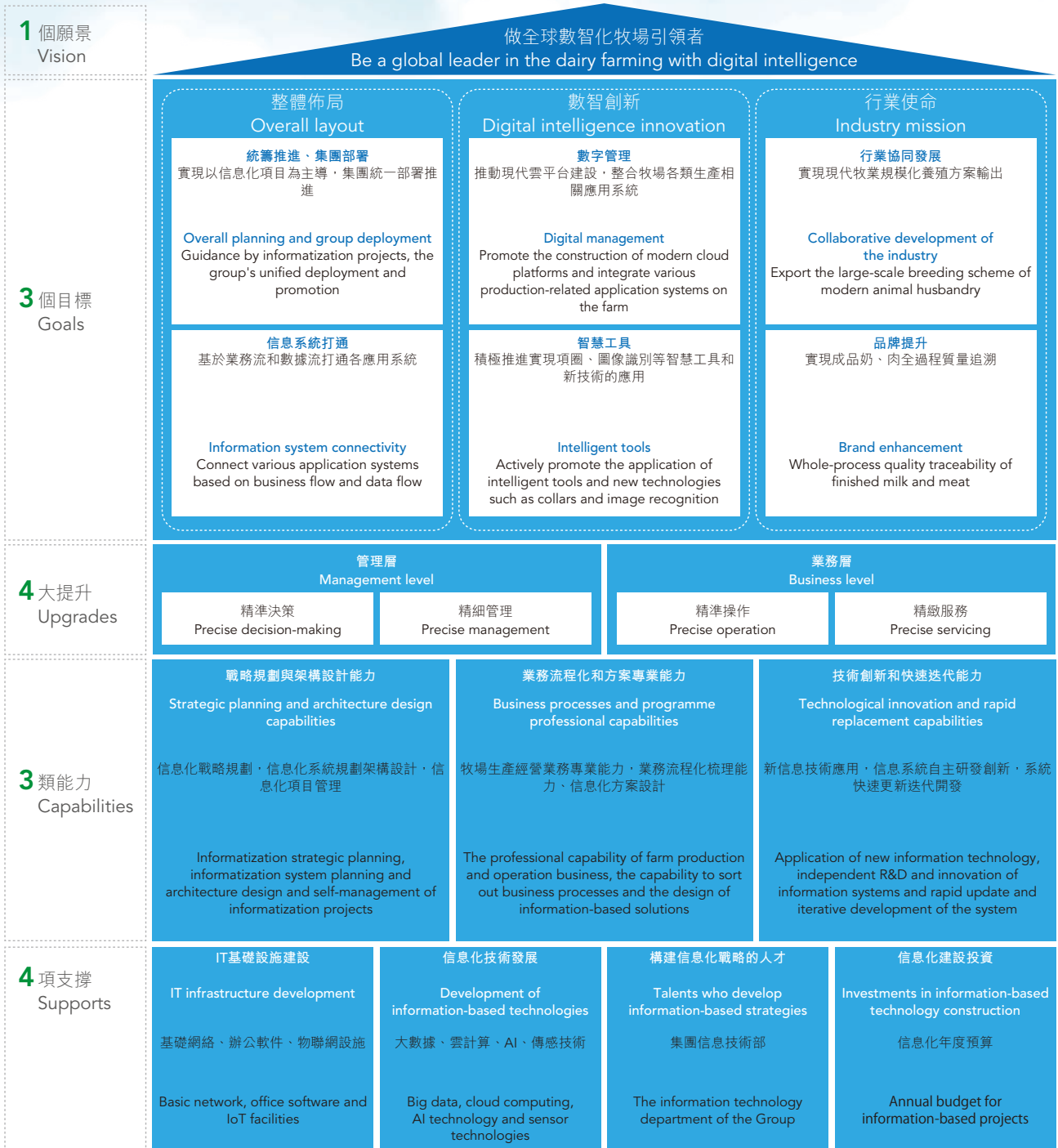
現代牧業以「做全球數智化牧場引領者」為願景，打造數智戰略屋。以打通整體信息系統、創新應用智慧工具和雲平台管理、行業協同發展為目標，建立針對管理層和業務層的提升策略，以建設基礎措施、發展信息化技術、組建專業團隊、加大投資為關鍵支撐，高效高質地推進數智化升級轉型。

With the vision of “becoming a global leader in digital intelligence farming”, Modern Dairy has built a digital intelligence strategy house. With the goal of opening up the overall information system, innovating the application of intelligent tools and cloud platform management and realizing the coordinated development of the industry, we have established an improvement strategy for the management layer and the business layer. With the construction of basic measures, the development of information technology, the establishment of professional teams and increased investment as the key support, we have advanced the digital intelligence upgrade and transformation in an efficient and high-quality manner.

在信息化戰略的指引下，現代牧業以SAP(業務流程管理軟件)為核心，借助統一的信息化平台及豐富的奶牛養殖經驗，實現標準化、規模化養殖解決方案輸出。通過「雲養牛」和「愛養牛」等數字平台公司，打通飼料供應端、奶牛養殖端、牛奶生產端的質量數據，實現全鏈條質量追溯。

Under the guidance of the informatization strategy, Modern Dairy takes SAP (a business process management software) as the core, and relies on a unified information platform and rich dairy farming experience to achieve standardized and large-scale breeding solutions. Through digital platform companies such as Yunyangniu and Aiyangniu, we have opened up the quality data of the feed supply end, dairy farming end and milk production end, thus realizing the quality traceability of the whole chain.

信息化戰略屋
Information Strategy House



- 牧場管理平台
Farm Management Platforms

在集團統一的部署下，現代牧業不斷探索新興技術在牧場生產的應用。

Under the unified deployment of the Group, Modern Dairy continues to explore the application of emerging technologies in farm production.

- **牧安雲**：通過「牧安雲管理平台」實現自動識別風險、安全動態監測預警、培訓與應急、雙重防禦管理以及安全輔助決策等作用，保障牧場各項工作符合安全規定，提高牧場生產安全管理水平。

Mu'an Cloud: Through the Mu'an Cloud Management Platform, the functions of automatic risk identification, safety dynamic monitoring and early warning, training and emergency response, dual defense management and safety auxiliary decision-making are realized to ensure that all work on the farms complies with safety regulations and improve the management level of farm production safety.

- **雲養牛**：應用AI、BigData、IoT等數據技術產品，自動獲取奶牛行為底層數據供牧場經營管理全維度分析，打造百萬頭奶牛共享服務平台，讓牧場實現經驗養牛到數字養牛，真正通過數據做決策。現代牧業通過智能解決方案應用，實時採集活體牛只行為數據、運營數據等，快速建立牛只行為數據庫，深入奶牛行為數據研究，建立牧場管理大數據分析模型，並不斷應用數據校準，再反哺到牧場管理中，實現牧場運營智能體檢。

Yunyangniu: Apply AI, Big Data, IoT and other data technology products to automatically obtain the underlying data of dairy cow behaviors for full-dimensional analysis of the farm operation and management, so as to create shared service platforms for millions of dairy cows, transform the cattle raising method from experience to digitalization and truly make decisions based on data. Through the application of intelligent solutions, Modern Dairy collects live cow behavior data and operation data in real-time, quickly establishes a cow behavior database, conducts in-depth research on dairy cow behavior data and establishes a big data analysis model for the farm management, and it continuously calibrates the data, and then feeds it back to the management of the farms, so as to realize the intelligent operation of the farms.

數字化牧場建設以信息化項目運營為主導，通過建設牧場各業務領域的信息化項目，最終整體實現數字化牧場建設。

The construction of a digital farm is driven by the operation of informatization projects. By constructing informatization projects in various business fields of the farm, the construction of a digital farm can be realized as a whole.

- 自動測產：通過自動採集測產數據代替人工採集測產數據。在減少大量人力並提升測產效率的同時，測產數據精準度也得到了極大提升。測產準確率可達98%，為牛群分群，飼料配比等業務提供了更加精準的數據支持。

Automatic production detection: Automatic collection of production measurement data replaces manual collection of production measurement data. While reducing a lot of manpower and improving the efficiency of production measurement, the accuracy of production measurement data has also been greatly improved. The accuracy rate of yield measurement can reach 98%, which provides more accurate data support for cattle grouping, feed ratio and other businesses.

- 精準飼餵：在全混合日糧(TMR)製作環節通過引入智能飼餵系統，減少攪拌站中人員的參與，降低人員操作的風險，及時、準確地記錄每一種物料、每一批次投餵的過程，通過智能手段實現每罐日糧均可追溯。同時系統後台對每個投料手、每種物料的上料準確率等多個維度進行分析，給管理者提供決策方案，保證TMR的精準飼餵，最終實現原料取料智能化、投料智能化、拌料智能化、餵料智能化，上料準確率從90%提升到96%。同時達到飼料節約和降低成本的效果。

Precision feeding: In the production process of total mixed ration (TMR), through the introduction of intelligent feeding system, the participation of personnel in the mixing station is reduced, the risk of personnel operation is reduced, and the process of feeding each material and each batch is recorded in a timely and accurate manner through intelligent means, realizing the traceability of each can of ration. At the same time, the system backend analyzes multiple dimensions such as each feeding hand and the feeding accuracy of each material, provides decision-making solutions for managers to ensure precise feeding of TMR, and finally realizes intelligent raw material taking, delivering, mixing and feeding. The feeding accuracy rate increased from 90% to 96%. It achieves the effect of feed saving and cost reduction at the same time.



- 繁育管理：通過牛群管理信息系統對21天懷孕率的計算，打通繁育評估工作滯後的壁壘，極大提高反饋繁育工作的效率。通過對繁殖數據分析可以找出影響牛群繁殖效率的主要因素並加以改進利用。通過數字化應用，給日常繁殖操作帶來諸多便利，例如通過電子耳標以及智能識別設備，實現快速精確的個體識別，提高發情揭發、流產揭發的效率和準確性。管理者可通過多維度分析得出牛群的實際情況後，制定適合該牧場的中長期繁殖策略。

Breeding management: Through the calculation of the 21-day pregnancy rate by the cattle herd management information system, the bottleneck of lagging breeding evaluation work is broken through, and the efficiency of feedback breeding work is greatly improved. Through the analysis of breeding data, the main factors affecting the breeding efficiency of the cattle herd can be found and improved. Through digital applications, many conveniences are brought to daily breeding operations. For example, through electronic ear tags and intelligent identification devices, fast and accurate individual identification can be achieved, improving the efficiency and accuracy of estrus detection and abortion detection. Through multidimensional analysis of actual situation of the cattle herd, managers can formulate medium- and long-term breeding strategies suitable for the farm.



- **知識共享平台**
Knowledge Sharing Platform

現代牧業攜手愛養牛合作打造的「牛人慧」學習平台是牧業首創養牛人的專屬綜合學習平台。

The “Niurenhui (牛人慧)” learning platform jointly created by Modern Dairy and Aiyangniu is the first exclusive comprehensive learning platform in the industry for cow keepers.

- **平台結構**：平台上線後通過8大模塊、36個子模塊、77個功能、254個子功能滿足現代牧業養牛人的「組織學習+社交學習+自主學習」需求，通過線上線下混合學習的模式賦能牧業職場牛人。
Platform structure: After the platform goes online, it meets the needs of Modern Dairy’s cow keepers of “organizational learning + social learning + independent learning” through 8 modules, 36 sub-modules, 77 functions and 254 sub-functions, and empowers cow keepers in the animal husbandry workplace through an online and offline hybrid learning model.
- **功能強大**：平台關聯現代牧業的人事系統，抓取有效數據，精準識別每個人的學習進度和不同需求，制定學習地圖，匹配學習方案，為員工搭建職業發展通道。
Strong functions: The platform is connected to Modern Dairy’s personnel system. By capturing valid data, it can accurately identify each individual’s learning progress and different needs, and then formulate learning maps and match learning plans, thus building career development channels for employees.
- **內容充實**：平台齊聚行業內外大咖，精選國內外優質課程，萃取各牧場組織經驗，建立牧業特色的海量課程庫，多形式呈現，打造「知－行－證」全新學習模型。
Enriched content: The platform gathers famous teachers inside and outside the industry, selects high-quality courses at home and abroad, offers the experience of various farm organizations, and establishes a large number of courses (presented in multiple forms) with animal husbandry characteristics, aiming to create a new learning model of “knowledge-action-certification”.
- **賦能行業**：公司不僅為現代牧業的全體員工進行培訓，還主動承擔社會責任，面向全國的社會牧場進行公益培訓，提升全國的牧業人養牛水平，在疫情期間因堅持公益直播，得到呼市電視台的專題報道，形成較好的社會正能量影響力，帶動牧業從業者的奮發綻放。
Empowering industry: The Company not only provides training for all employees of Modern Dairy, but also takes the initiative to undertake social responsibilities by conducting public welfare training for other farms across the country to improve the cattle raising level of cow keepers across the country. The platform received special reports from Hohhot TV stations because of its insistence on live broadcasting for public welfare during the epidemic period, which formed a good social influence and drove the development of animal husbandry practitioners.







MODERN FARMING
现代牧业

现代牧业牛人慧 学习平台正式发布

打造现代牧业智慧大脑

现代牧业独立定制开发
牧业首创养牛人专属综合学习平台
引领牛人赋能成长新趋势

平台亮点

- 线上线下混合学习 同专业场景互动交流
组织学习+社交学习+自主学习
- 齐聚行业内外大咖 赋能牧业职场牛人
行业权威专家+国内知名老师+企业内训达人
- 海量课程胜任力覆盖 多形式呈现即时掌握
经营案例库+运营经验库+操作流程库
- 多终端全功能持续优化 高效率助成长加速绽放
问卷调研+考试认证+打榜PK+牛人嘉奖+看板管理



现代牧业入选中国奶业协会《中国奶业数字化转型卓越案例》
Modern Dairy was selected into the list of the Excellent Cases of
Digital Transformation of China's Dairy Industry by the Dairy Association of China

- **知識產權保護**
Intellectual Property Rights Protection

現代牧業在積極探索新產品、研究創新技術的同時，嚴格遵守《中華人民共和國專利法》、《中華人民共和國商標法》、《中華人民共和國專利實施細則》等法律法規，制定和完善內部相應的知識產權管理體系，規範知識產權管理工作，宣傳普及專利知識，強化專職部門對侵權行為的敏感度，建立安全防線，有效規避侵權行為所導致的聲譽風險、經濟損失等，建立行之有效的應對措施和處置流程，及時處理訴訟案件，保護本公司的合法權益。

While actively exploring new products and researching innovative technologies, Modern Dairy strictly abides by the Patent Law of the People's Republic of China, the Trademark Law of the People's Republic of China and the Detailed Rules for the Implementation of Patents of the People's Republic of China. We formulate and improve the corresponding internal intellectual property rights management system, standardize intellectual property rights management work and publicize and popularize patent knowledge, so as to strengthen the sensitivity of responsible departments to infringements, establish a security line of defence and effectively avoid reputation risks and economic losses caused by infringements. We have also established effective response measures and handling procedures to deal with litigation cases in a timely manner and thus protect the legitimate rights and interests of our Company.



1.2 發展可持續農業

Developing Sustainable Agriculture

現代牧業支持國內養殖業的可持續發展事業，積極探索環保、生態、效益相結合的生態循環創新之路，遵循「整體、協調、循環、再生」的原則，發展規模化、現代化、標準化的養殖和生產模式，通過建立長效機制、打造生態友好牧場、創新循環經濟模式，大力推廣應用生態農業技術，提高產地環境質量，推行綠色循環生產。

Modern Dairy supports the sustainable development of the domestic breeding industry. We actively explore the road of ecological cycle innovation that combines environmental protection, ecology and benefits, follow the principles of “integration, coordination, recycling and regeneration”, and develop large-scale, modern, and standardized breeding and production models. Through establishing a long-term mechanism, creating eco-friendly farms and innovating circular economic models, we vigorously promote the application of ecological agricultural technologies to improve the environmental quality of production areas and promote green circular production.

- **強化頂層設計：**集團層面統籌規劃可持續農業實踐工作，成立專職部門，專項負責各牧場糞污處理設施的安全監督、檢查、指導；牧場層面成立安環處，落實各項舉措，將執行進展與環境績效指標掛鉤。

Strengthening the top-level design: Coordinate and plan sustainable agricultural practices at the group level, and set up a dedicated department to be responsible for the safety supervision, inspection, and guidance of manure treatment facilities in various farms. A safety and environmental department will be established at the farm level to implement various measures and link the implementation progress with environmental performance indicators.

- **規劃實施方案：**公司合理規劃牧場建設，通過科學用地和綠化建設，保護和恢復牧場週邊生態的多樣化；創建以污染治理向資源利用、以種養分離向種養結合轉型升級的農業牧場，形成良性發展的生態圈。

Planning implementation plans: The Company will rationally plan the farm construction, and protect and restore the ecological diversity around the farms through scientific land use and greening construction. It will also create agricultural farms that transform and upgrade from pollution control to resource utilization, from the separation of planting and breeding to a combination of planting and breeding, forming an ecological circle of healthy development.





附件

2022年度国家级生态农场名单

编号	省份(含兵团)	农场类型	主体名称
1	北京	种植	北京老农乐专业合作社
2		种植	北京绿康种植专业合作社
3		种植	北京绿天生态农业科技有限公司
4		种养结合	北京伟联山农场农牧工用品公司
5		种植	北京中农良道生态农业有限公司
6		种植	合亨牧业(北京)农业发展有限公司
7		种植	天津绿康农场有限公司
8	天津	天津多利丰农业科技发展有限公司	
9	河北	种植	承德康沃生态农业科技有限公司
10		种植	河北省农产品开发有限公司
11		种植	河北天福源农业科技有限公司
12		种植	河北翠苑电子科技有限公司(李集农场)
13		种养结合	河北美露多食品集团股份有限公司
14		种植	威县康康农业科技有限公司
15		养殖	现代牧业(衡水)有限公司
16		种植	阜平县现代牧场生态农场
17		种植	邯郸市牧业种植业专业合作社
18		种植	邯郸绿康种植专业合作社
19	种植	昌黎县晋农农牧专业合作社	
20	种植	元县沃丰农业种植专业合作社	
21	山西	种植	山西沁世果业专业合作社
22		种植	山西美福源农业股份有限公司
23		种植	山西丰源农产品股份有限公司
24		种植	朔州市新玉农牧有限公司
25		种植	夏县美源农业专业合作社
26		种植	永济沃润有机冬季家庭农场

编号	省份(含兵团)	农场类型	主体名称
27	内蒙古	种养结合	内蒙古源农源农业科技有限公司
28		种植	内蒙古美露牧业(集团)有限责任公司
29		种植	内蒙古美露农业科技发展有限公司
30		种养结合	内蒙古科美生态农场
31		种植	马头山牧场有机生态专业合作社
32		养殖	内蒙古科美生态农场
33		种养结合	内蒙古科美生态农场
34		养殖	大港绿康生态农业发展有限公司
35		种植	大连中农绿康有限公司
36		养殖	大连中农绿康有限公司
37	辽宁	种植	大连家宝贝农业科技有限公司
38		种植	大连市绿康农业开发有限公司
39		种植	大连恒丰生态农业科技发展有限公司
40		养殖	大连鑫玉龙海洋生物科技有限公司
41		种植	抚顺市富农农业科技有限公司
42		种植	海城市康康农业食品有限责任公司
43		种植	盘锦康康农业有限公司
44		种植	盘锦千鹤农业有限公司
45		种植	盘锦源农源农业种植专业合作社
46		种植	盘锦源农源农业种植专业合作社
47	吉林	种植	非农沃康农业专业合作社
48		种养结合	大安农力种植养殖专业合作社
49		种植	四平汇农绿康农业家庭农场
50		种植	洮南康康农业有限公司
51		种植	通化五福现代农业股份有限公司
52		种植	辉南县大成农业股份有限公司(分公司)
53		种养结合	辉南县大成农业股份有限公司
54		种植	黑龙江省沃康农业专业合作社
55		种植	五常市康康水稻种植专业合作社

编号	省份	农场类型	主体名称
56	广西	种植	富源县美田农场家庭农场
57		种植	中山市万华农业科技有限公司
58		种植	广西康康农业集团有限公司
59		种植	广西康康农业集团有限公司
60		种植	广西康康农业集团有限公司
61		种植	广西康康农业集团有限公司
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64		种植	广西康康农业集团有限公司
65		种植	广西康康农业集团有限公司
66	海南	种植	海南康康农业集团有限公司
67		种植	海南康康农业集团有限公司
68		种植	海南康康农业集团有限公司
69		种植	海南康康农业集团有限公司
70		种植	海南康康农业集团有限公司
71		种植	海南康康农业集团有限公司
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73		种植	海南康康农业集团有限公司
74		种植	海南康康农业集团有限公司
75		种植	海南康康农业集团有限公司
76	重庆	种植	重庆康康农业集团有限公司
77		种植	重庆康康农业集团有限公司
78		种植	重庆康康农业集团有限公司
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82		种植	重庆康康农业集团有限公司
83		种植	重庆康康农业集团有限公司
84		种植	重庆康康农业集团有限公司
85		种植	重庆康康农业集团有限公司
86	四川	种植	四川康康农业集团有限公司
87		种植	四川康康农业集团有限公司
88		种植	四川康康农业集团有限公司
89		种植	四川康康农业集团有限公司
90		种植	四川康康农业集团有限公司
91		种植	四川康康农业集团有限公司
92		种植	四川康康农业集团有限公司
93		种植	四川康康农业集团有限公司
94		种植	四川康康农业集团有限公司
95		种植	四川康康农业集团有限公司

現代牧業牧場榮獲2022年「國家級生態農場」稱號
Modern Dairy Farm won the title of "National Ecological Farm" in 2022



- **通力合作 構建零毀林價值鏈**
Joint Efforts to Build a Zero-deforestation Value Chain

現代牧業重視上游價值鏈毀林風險管理，積極推動公司採供原材料的溯源工作，協同公司關鍵一級供應商推行無毀林風險採購試點，以提高農業種植能力，促進當地可持續性農業的發展。大豆的種植是造成森林砍伐的重要原因，公司採購的豆粕中70%來自中糧集團，其致力於減少森林砍伐。中糧國際2020年7月向國際社會公開承諾到2023年實現直接從巴西農民手中採購大豆的全面可追溯；截至2021年12月底，已實現對巴西大豆重要產區「馬於皮巴」所有直接採購大豆100%可追溯；中糧國際於2022年5月做出了新的承諾：中糧國際將在亞馬遜、塞拉多和大查科等拉美環境敏感地區，於2030年之前建立完全不涉及毀林和植被破壞問題的大豆供應鏈。

Modern Dairy pays attention to deforestation risk management in the upstream value chain by actively promoting the traceability of raw materials purchased and supplied by the Company and cooperating with the Company's key first-tier suppliers to implement the pilot project of deforestation risk-free procurement, so as to improve agricultural planting capacity and promote the development of local sustainable agriculture. Soybean cultivation is an important cause of deforestation. 70% of the soybean meal purchased by the Company comes from the COFCO Group, which is committed to reducing deforestation. COFCO International made a public commitment to the international community in July 2020 to realize full traceability of soybeans purchased directly from Brazilian farmers by 2023. By the end of December 2021, it had achieved 100% traceability of all soybeans directly purchased from Matopiba, the important soybean-producing area in Brazil. COFCO International made new commitments in May 2022, that is, COFCO International will establish a soybean supply chain that does not involve deforestation and vegetation destruction in environmentally sensitive areas of Latin America such as the Amazon, Cerrado, and Gran Chaco by 2030.

此外，現代牧業2022年除了進口的5,775頭奶牛，其他牛隻均為自有繁殖，所有進口奶牛均來自無森林砍伐地區。

In addition, except for the 5,775 dairy cows imported by Modern Dairy in 2022, all other cows were self-bred, and all imported dairy cows came from areas without deforestation.

- **合理規劃保護生物多樣性**
Proper Planning to Protect Biodiversity

現代牧業開展責任運營，秉承生態環保的理念，持續優化牧場布局，堅持生態優先，保護耕地，節約集約用地。在牧場選址、設計、投入生產運營全階段，施行環境及社區影響評估，堅持「以預防為主、防治結合、綜合治理」的原則，各部門共同採取措施，對污染進行聯合防治，以達到國家及地方有關環境保護方面的標準和規定，落實生產運營活動對生態和社區影響的預防和恢復工作。

Modern Dairy carries out responsible operations by adhering to the concept of ecological and environmental protection, continuously optimizing the layout of farms, sticking to ecological priority, protecting cultivated land and economically and intensively using the land. In the whole stage of site selection, design, production and operation of farms, environmental and community impact assessments are implemented with the principle of "prevention first, a combination of prevention and control and comprehensive management". All departments will jointly take measures to jointly prevent and control pollution to meet national and local environmental protection standards and regulations and implement the prevention and restoration of the impact of production and operation activities on ecology and communities.

- **生物多樣性保護策略**
Biodiversity Conservation Strategy

管理政策：

Management Policy:

公司將生物多樣性保護作為ESG管理工作的重要組成部分，致力於在全產業鏈推動生物多樣性保護行動。公司遵守《畜禽糞污土地承載力測算技術指南》《固定污染源排污許可分類管理名錄》《排污許可證申請與核發技術規範（畜禽養殖行業）》等相關規定。在內部制定《供應商綜合評價表》等制度文件中，考慮將場地選址、土地利用、資源使用與廢棄物管理、供應商生態保護舉措及生態恢復等內容納入政策之中，通過多樣化舉措確保減少公司運營活動對生態系統的干擾。

The Company regards biodiversity protection as an important part of ESG management and is committed to promoting biodiversity protection actions throughout the industry chain. The Company follows relevant regulations, such as Technical Guidelines for the Calculation of Land Carrying Capacity of Livestock and Poultry Manure, List of Classified Management of Pollutant Discharge Permits for Stationary Pollution Sources, Technical Specifications for Application and Issuance of Pollutant Discharge Permits (Livestock and Poultry Breeding Industry). When formulating the Comprehensive Evaluation Form for Suppliers, the Company considered incorporating site selection, land use, resource use and waste management, supplier ecological protection measures, and ecological restoration into the policy to ensure that the disruption of the Company's operations to the ecosystem is minimized through diversification initiatives.



治理架構：

Governance Structure:

生物多樣性作為公司ESG的重要性議題之一，由公司董事會和ESG委員會全面監督和檢討工作進度，由公共事務部負責制定工作計劃及推進實施方案，其他相關部門支持協作。

Biodiversity is one of the important issues of the Company's ESG. The Company's board of directors and the ESG committee comprehensively supervise and review the work progress. The public affairs department is responsible for formulating work plans and promoting implementation plans, and other relevant departments support cooperation.

風險管理：

Risk Management:

全面考察所在區域的社會環境、地理環境、生物資源、人口、交通狀況及市政規劃等情況並統計跟蹤數據變化，充分識別各運營地區的生物多樣性風險，並制定及落實相應的綜合治理方案，保證生態風險得到有效控制。

The Company comprehensively inspects the social environment, geographical environment, biological resources, population, traffic conditions, and municipal planning of the area where it is located, tracks data changes, fully identifies biodiversity risks in each operating area, and formulates and implements corresponding comprehensive management plans to ensure that ecological risks are effectively controlled.

公開發佈《生物多樣性聲明》¹，承諾：

The Company publicly released the "Biodiversity Statement"¹, pledging to:

- 一切生產運營活動嚴格遵守國家及地方環境保護相關的規定和要求。
All production and operation activities abide by the relevant regulations and requirements of national and local environmental protection.
- 堅持推進業務可持續發展，尊重當地社區和利益相關方的權利和利益。
Persist in promoting sustainable business development and respect the rights and interests of local communities and stakeholders.
- 避免在具有重要生物多樣性價值的保護區內開展業務活動。
Avoid conducting operations in protected areas with important biodiversity values.

¹ 《生物多樣性聲明》於公司官網連結：

The link of Biodiversity Statement in the Company's official website:
https://www.ir-cloud.com/hongkong/01117/irwebsite/docs/Biodiversity_Statement.pdf



- 任何土地開發項目須在取得土地許可後開展。
Any land development project must be carried out after obtaining the land permit.
- 採用科學的方法和最佳實踐，評估和監測我們的活動對生物多樣性的影響，並採取適當的措施減少負面影響，增加正面影響。
Adopt scientific methods and best practices, assess and monitor the impact of our activities on biodiversity, and take appropriate measures to reduce negative impacts and increase positive impacts.
- 優化我們的飼料種植、飼料加工、奶牛育種、原料奶生產等業務流程，提高資源利用效率，減少廢棄物排放，降低碳足跡，減少生態干擾。
Optimize our business processes such as feed cultivation, feed processing, dairy cow breeding, raw milk production, etc., improve resource utilization efficiency, reduce waste emissions, lower carbon footprint, and reduce ecological disturbance.
- 保護和恢復我們經營的土地上的原生或本土植被，維護土壤健康，防止水土流失，增加碳匯。
Protect and restore the native or indigenous vegetation on the land we operate on, maintain soil health, prevent soil erosion, and increase carbon sinks.
- 支持和參與與生物多樣性相關的研究、教育、培訓、宣傳等活動，提高我們的員工、合作夥伴、客戶和公眾的生物多樣性意識和能力。
Support and participate in biodiversity-related research, education, training, advocacy and other activities, raise the awareness and capacity of our staff, partners, customers and the public on biodiversity issues.
- 定期報告我們的生物多樣性管理情況和績效，接受內外部的審查和評估，並不斷改進我們的生物多樣性策略和行動。
Report our biodiversity management situation and performance regularly, accept internal and external review and evaluation, and continuously improve our biodiversity strategy and actions.



生物多樣性保護舉措 Biodiversity Conservation Initiatives

科學選址 Scientific site-selection

- 風險評估：全面考察所在區域的社會環境、地理環境、生物資源、人口、交通狀況及市政規劃等情況並統計跟蹤數據變化，有效識別項目所在地的環境風險和水壓力風險，按照《土壤環境質量建設用地土壤污染風險管控標準(試行)》(GB36600-2018)、《環境空氣質量標準》(GB3095-1996)二級標準、《地下水質量標準》(GB/T14848-2017)及《聲環境質量標準》(GB3096-2008)執行當地土壤容量、大氣、水及噪音的環境質量評價。
Risk assessment: Comprehensively investigate the social environment, geographical environment, biological resources, population, traffic conditions and municipal planning of the region, and track data changes statistically. Effectively identify the environmental risks and water stress risks of the project site, and implement the environmental quality assessment of local soil capacity, atmosphere, water and noise in accordance with the Soil Environmental Quality Construction Land Soil Pollution Risk Control Standards (Trial) (GB36600-2018), the secondary standards of the Ambient Air Quality Standard (GB3095-1996), the Groundwater Quality Standard (GB/T14848-2017) and the Acoustic Environmental Quality Standard (GB3096-2008).
- 規避風險：依據國家《畜禽規模養殖污染防治條例》、《畜禽養殖業污染防治技術政策》、《畜禽場區設計技術規範》、《動物防疫條件審查辦法》、《畜禽糞污土地承載力測算技術指南》等制度標準，充分考慮生產活動可能造成的生態環境負面影響，確保遠離禁養區、水源地、生態保護區、居民聚集區及風景名勝區等環境敏感點。同時遵循《中華人民共和國環境保護法》要求在項目建設前期(環評手續辦理期間)開展「公眾參與」活動，發放《公眾參與調查表》對項目情況充分告知。
Risk evasion: According to the Regulations on Pollution Prevention and Control of Large-scale Livestock and Poultry Breeding, the Technical Policy on Pollution Prevention and Control of Livestock and Poultry Breeding Industry, the Technical Specifications for Design of Livestock and Poultry Farms, the Methods for Review of Animal Epidemic Prevention Conditions, the Technical Guidelines for Calculation of Land Carrying Capacity of Livestock and Poultry Manure and other standards, fully consider the possible negative impacts on the ecological environment caused by production activities, and ensure that they are far away from environmentally sensitive points such as areas where breeding is prohibited, water sources, ecological protection areas, residential areas, and scenic spots. At the same time, follow the Environmental Protection Law of the People's Republic of China to carry out "public participation" activities in the early stage of project construction (during the period of environmental impact assessment procedures), and issue the "Public Participation Questionnaire" to fully inform the project situation.

合理布局
Rational layout

- 規範用地：獲得當地土地使用許可批覆及相關部門規模化畜禽養殖備案等批覆文件，保證土地使用權利合法合規；涉及土地承包轉讓情況的，與相關社區村民集體簽訂相關協議，明確雙方的權利與義務，尊重和保護土著人民的權利，避免爭議發生。

Regulated land use: Obtain the approval of the local land use permit and the relevant departments for the record of large-scale livestock and poultry breeding and other approval documents to ensure that the land use rights are legal and compliant. In the case of land contracting and transfer, relevant agreements must be signed with the villagers in the relevant communities to clarify the rights and obligations of both parties, respect and protect the rights of local residents, and avoid disputes.

- 科學規劃：整體以「合理布局，節約用地，適當預留發展餘地」為總平面布置的指導原則，按照上下風向布局、遵循雨污分流、淨污分道建設，保證各功能區布置相對獨立，實現生產區、生活管理區的隔離，有效防疫、生態環保、生產便利。增加無污染或污染少的先進工藝及設備的選用，從源頭控制生態破壞。牧場以對生態、社區環境零干擾的方式，設計基礎設施，建立地下管道輸送固液分離後的液體到沼液池，處理後作為液體肥料施用於農田。

Scientific planning: On the whole, follow the guiding principles for the general layout of "reasonable layout, economical land use and appropriate reserved room for development", and the construction is carried out according to the layout of the upper and lower wind directions, the separation of rain and sewage, and the separation of clean and sewage, to ensure that the layout of each functional area is relatively independent with the isolation of the production area and the living management area as well as effective epidemic prevention, ecological environmental protection and convenient production. Increase non-polluting or less polluting advanced technology and equipment, controlling ecological damage from the source. The farms design the infrastructure in a way of zero interference to the ecology and community environment, and build underground pipelines to transport the liquid after solid-liquid separation to the biogas digester, and then apply it to the farmland as liquid fertilizer after treatment.



	<ul style="list-style-type: none"> - 加強綠化：以點、線、面相結合的綠化原則，提高項目區內部綠化率，採取喬木、灌木和草坪高、中、低混植形式，構成立體綠色空間，充分發揮綠地的防護、活動功能和改善環境的作用，以保持廠區環境優美整潔，同時提升空氣淨化和降低噪聲。 Increase greening areas: Using the greening principle of "points, lines and planes" to increase the greening rate inside the project areas, and adopt high, medium, and low mixed planting forms of trees, shrubs and lawns to form a three-dimensional green space, giving full play to the protection and activity functions of the green space and the role of improving the environment and keeping the factory environment beautiful and tidy while improving air purification and reduce noise.
<p>持續監測及整改 Continuous monitoring and rectification</p>	<ul style="list-style-type: none"> - 大氣環境分析：主要控制施工揚塵，考慮當地地理和氣候特徵，從施工現場條件、管理水平、機械化程度等方面，採用密閉式槽車、及時清掃、沖洗運輸通道、限速等措施降低對週邊大氣環境帶來的不利影響。 Air environment analysis: Mainly control construction dust, taking into account local geographical and climate characteristics. From the aspects of construction site conditions, management level, mechanization degree, etc., measures such as adopting closed tankers, timely cleaning, flushing transportation channels and the speed limit are adopted to reduce the adverse impact on the surrounding atmospheric environment. - 廢氣影響分析：主要控制各類機械設備及運輸車輛的尾氣排放和建築物油漆、塗料等揮發性氣體的產生。 Analysis of exhaust gas impact: Mainly control the exhaust emissions of various mechanical equipment and transport vehicles and generation of volatile gases such as building paints and coatings.



- 聲環境影響分析：主要控制各種施工機械設備運轉和車輛運行帶來噪聲污染，採用《建築施工場界環境噪聲排放標準》(GB12523-2011)進行施工噪聲對周圍地區的聲環境影響的評價。
Analysis of acoustic environment impact: Mainly control the noise pollution caused by the operation of various construction machinery and equipment and vehicle operation, and use the Environmental Noise Emission Standard for Construction Site Boundary (GB12523-2011) to evaluate the impact of construction noise on the acoustic environment of the surrounding areas.
- 水環境影響分析：主要控制生產廢水，通過對設備進行定期維護、加強防治污水監管等措施緩釋環境影響。
Water environment impact analysis: Mainly control production wastewater, and reduce environmental impact through regular maintenance of equipment, strengthening supervision of sewage prevention and control and other measures.
- 生態環境影響分析：分析挖方、填方等生產活動對局部原生地貌、原有的地表植被造成的影響，通過加強防護、綠化工程等措施，最大程度減緩對生態環境的影響。
Ecological environmental impact analysis: Analyze the impact of production activities such as excavation and filling on the local original landform and original surface vegetation, and reduce the impact on the ecological environment to the greatest extent through measures such as strengthening protection and greening projects.



- 種養結合促進循環經濟**
Combining Planting and Breeding to Promote Circular Economy

本公司提出了循環牧場的系統化解決方案，在構建場區內部小循環、種養結合中循環、區域生態大循環的基礎上，堅持種養結合、利用優先、因地制宜、合理選擇。持續解決現代牧業規模奶牛場糞污處理和資源化問題，實現種養平衡、農牧互動、生態循環的奶牛養殖體系。「種養加一體化」生產模式通過SGS國際認證。

The Company proposed a systematic solution for circular farms. On the basis of constructing a small cycle within the site, a medium cycle of the combination of planting and breeding and a large cycle of regional ecology, we insist on combining planting and breeding, giving priority to utilization, adapting measures to local conditions and making reasonable choices, in order to continuously solve the problems of manure treatment and resource utilization in large-scale dairy farms of Modern Dairy, set up a dairy farming system with balanced farming, interactive farming and ecological cycle. The production model of "Integration of Forage Grass Planting, Cows Breeding and Milk Processing" has obtained SGS international certification.



現代牧業(蚌埠)有限公司獲得SGS國際認證
 Modern Dairy (Bengbu) Co., Ltd. obtained SGS international certification

現代牧業構建「飼草種植 – 奶牛養殖 – 糞污處理 – 沼肥還田(沼氣發電)– 飼草種植」的綠色循環產業鏈條，從創新綜合處理工藝和末端開發利用兩方面發力，科學處理養殖過程中產生的糞污，實現廢棄物資源化。

Modern Dairy built a green circular industrial chain of "Forage Planting – Cow Breeding – Manure Treatment – Soil Fertilization with Organic Waste (power generation with biogas) – Forage Planting", and makes efforts from two aspects of innovative comprehensive treatment process and terminal development and utilization, so as to scientifically treat the manure generated in the breeding process and realize waste recycling.

在飼草種植方面，現代牧業着眼現代農業發展模式，成立以現代牧業龍頭企業為主體的農業產業化聯合體，充分發揮聯合體優勢，帶動聯合體成員種植優質玉米、優質小麥。

In terms of forage planting, Modern Dairy focuses on the modern agricultural development models, and established an agricultural industrialization consortium with leading modern animal husbandry enterprises as the main body, giving full play to the advantages of the consortium and driving the members of the consortium to grow high-quality corn and high-quality wheat.

在糞污處理方面，現代牧業牧場糞污處理採用「能源生態型」處理利用工藝，將排放物有效轉化，提高資源利用率。所有牧場配套建設糞污厭氧發酵處理設施，設施主要涉及發酵系統、沼氣淨化系統、沼氣利用系統、後處理系統。糞污無害化處理後，以生態消納為主，推進末端回用。

In terms of manure treatment, the manure treatment of Modern Dairy's farms adopts the "energy ecological" treatment and utilization process, which effectively transforms excrement and improves resource utilization. All farms are equipped with manure anaerobic fermentation treatment facilities, which mainly involve fermentation systems, biogas purification systems, biogas utilization systems, and post-treatment systems. After the manure has been harmlessly treated, it will be mainly ecologically digested and end-use reuse will be promoted.

牧場糞污處理產生的沼液基本都通過管道或車輛輸送至牧場週邊種植基地進行還田施肥，經沼液種植生產出的飼草回用到養殖區。通過沼液施用的飼草種植基地，在持續改善土壤質量的同時，也提升青貯玉米、青貯小麥等奶牛飼草料的品質，其中施用青貯種植地使用率為沼液總還田量的54%，沼液施用青貯種植地生產的青貯玉米、青貯小麥等全部回用牧場。

The biogas slurry produced by manure treatment on farms is basically transported to the planting bases around the farms through pipelines or vehicles for returning to the field for fertilization, and the forage grass produced by biogas slurry planting is reused in the breeding area. The forage grass planting bases applied by biogas slurry not only continuously improve the soil quality, but also improve the quality of dairy cow forage such as silage corn and silage wheat. In particular, 54% of the total amount of biogas slurry returned to the field is used to apply silage planting land, and the silage corn and silage wheat produced in the silage planting area with biogas slurry are all reused for farms.



案例
Case study

榮獲內蒙古奶業協會科技創新獎
Receiving the Science and Technology Innovation Award from the
Inner Mongolia Dairy Association

公司積極加強綠色發展具體實踐，推動牧場變「糞」為寶。探索出了一套成熟的糞水處理工藝，在原環保處理設施基礎上，配套建設了糞水處理系統及牛糞墊料發酵系統，改變「傳統堆肥方式」，實現「固液分離+覆膜發酵」循環再利用。創新的糞污處理模式為中國牧業的打造乳業產業綠色生態鏈起到行業標桿示範作用，於2022年獲得內蒙古奶業協會科技創新獎。



The Company actively strengthens the specific practice of green development to promote the effective use of manure in farms. We have explored a set of mature manure water treatment processes. On the basis of the existing environmentally-friendly treatment facilities, we have built a manure water treatment system and a cow dung litter fermentation system, thereby changing the traditional composting method and realizing recycling through “solid-liquid separation + film-covered fermentation”. The innovative manure treatment mode has played an industry benchmark role in building a green ecological chain of the dairy industry in China Animal Husbandry. In 2022, it won the Science and Technology Innovation Award issued by the Inner Mongolia Dairy Industry Association.

糞污發酵

Manure Fermentation

- 系統地建立由糞池、前處理池、發酵池(罐)、設備管道組成的糞污發酵系統，擴大糞污回收規模，最大化轉化沼氣。
Systematically establish a manure fermentation system consisting of septic tanks, pre-treatment tanks, fermentation tanks and equipment pipelines, so as to expand the scale of manure recovery and maximize the conversion of biogas.
- 發酵剩餘的產物(沼液)通過固液分離處理後，分別進行回收利用和暫存處理。
After the fermentation remaining products (biogas slurry) are treated in the method of solid-liquid separation, and it is recycled and temporarily stored.
- **沼渣利用**：經厭氧發酵處理和螺旋擠壓後產生的沼渣循環利用作為牛床墊料，具有乾燥、無味、無害、鬆散柔軟、濕度適宜等特點。在達到健康安全標準的同時，提高奶牛臥床舒適度，減少肢蹄疾病，從而增加奶牛營養效率和產奶量。
Solid manure utilization: The solid manure produced after anaerobic fermentation treatment and screw extrusion is recycled as bedding materials for cattle, with the characteristics of dryness, odorlessness, harmlessness, looseness and softness, and suitable humidity. While meeting health and safety standards, it can improve the comfort of dairy cows in beds and reduce limb and foot diseases, thereby increasing the nutritional efficiency and milk production of dairy cows.
- **沼液利用**：糞污處理產生的沼液作為優質的有機肥料，被輸送至牧場週邊種植基地進行還田施肥，提升土壤有機質，減少化肥和農藥使用量，增強農作物抗病能力。同時，利用流量計、GPS定位等先進的技術和設備，從產出、運輸、定位、線上管理等施肥環節形成閉環管理，使沼液還田過程實現按需精準施肥。
Biogas slurry utilization: The biogas slurry produced by manure treatment, as high-quality organic fertilizer, will be transported to the planting bases around the farm for returning to the field for fertilization, which can improve the organic matter of the soil, reduce the use of chemical fertilizers and pesticides, and enhance the disease resistance of crops. At the same time, using advanced technologies and equipment such as flow meters and GPS positioning, closed-loop management is formed from fertilization links such as output, transportation, positioning, and online management, so that the process of biogas slurry returning to the field can achieve on-demand and precise fertilization.



沼氣淨化

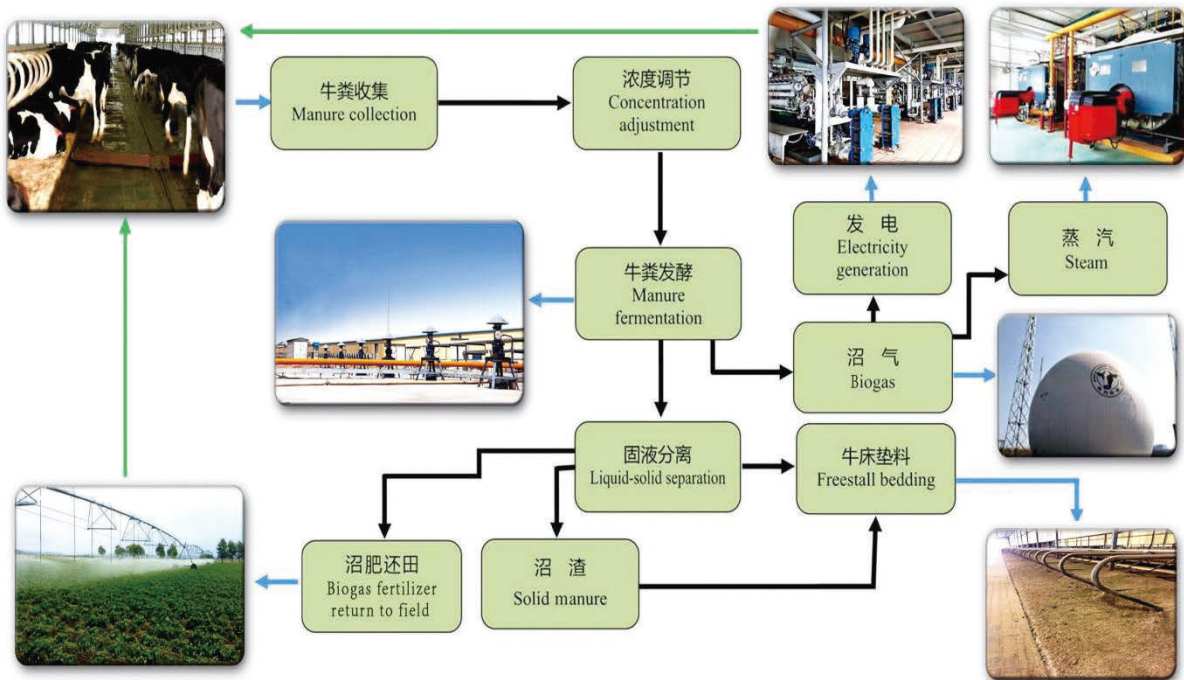
Biogas Purification

- 設置脫硫系統，去除水蒸氣和硫化氫，滿足沼氣發電機對沼氣的品質要求。

Set up a desulfurization system to remove water vapour and hydrogen sulfide, so as to meet the quality requirements of biogas generators for biogas.

- 沼氣發電：將經過淨化的沼氣進行發電，為自身循環系統及其他用氣點提供熱量。

Power generation with biogas: The purified biogas is used to generate electricity to provide heat for its own circulation system and other gas consumption points.



現代牧業循環經濟模式
Circular Economic Model of Modern Dairy

案例
Case study

因場施策，發展多種循環經濟模式

Developing different circular economy models according to the actual situation

- 「奶牛 - 沼 - 草」循環經濟模式：現代牧業蚌埠牧場作為全國奶牛存欄最大的牧場，存欄奶牛4萬頭，牧場周邊配套10萬畝青貯種植基地。牛糞發酵後的糞肥通過管道全部還田到種植地內培肥地力，使用糞肥的種植地每畝可減少20-25kg化肥用量；使用糞肥可實現青貯增產和創收，青貯畝產平均增產約0.2噸，每畝增加收入120元以上。同時提升青貯玉米品質，滿足奶牛的優質青飼料。通過這一模式，促進奶牛養殖業持續穩定發展。該模式合理配置奶牛的科學飼餵、糞污的科學處理、青貯玉米的科學種植等，多層次利用和開發自然資源，實現產業鏈內廢物的資源化利用。

Circular economic model of "cow-biogas-grass": The Bengbu Farm under Modern Dairy is the largest dairy farm in China, with 40,000 dairy cows and 100,000 mu of silage planting bases around the farm. The organic fertilizer fermented by cow dung is returned to the field through pipelines to cultivate soil fertility. The use of manure can reduce the amount of chemical fertilizer per mu by 20-25kg; the use of manure can increase the production of silage per mu by 0.2 tons and generate additional income of more than RMB120 per mu. At the same time, the quality of silage corn is improved to meet the high-quality green fodder for dairy cows. Through this model, the sustainable and stable development of the dairy farming industry will be promoted. This model features rational and scientific allocation of feeding of cows, scientific treatment of manure, scientific planting of land silage corn, multi-level utilization and development of natural resources, so as to realize resource-based utilization of waste in the industrial chain.



- 「奶牛 - 沼 - 茶」循環經濟模式：現代牧業洪雅牧場作為西南地區最大的單體奶牛現代化牧場，存欄奶牛7000多頭。洪雅牧場自2011年開始大力建設沼液管網，覆蓋面積廣，高效輸送沼液有機肥，普惠當地農戶，帶動當地茶葉產量，同時改良當地土壤，提高地力，修復生態。洪雅通過「三位一體」種養循環發展形成「以種定養、以養促種、種養循環」有機綜合體。
Circular economic model of “cow-biogas-tea”: Hongya Farm under Modern Dairy is the largest single modern dairy farm in Southwest China, with more than 7,000 cows in stock. Since 2011, Hongya Farm has been vigorously building the biogas slurry pipeline network, which covers a wide area and can efficiently transport biogas slurry organic fertilizers. The network has benefited local farmers by driving local tea production while improving local soil and soil fertility and restoring ecology. Hongya Farm has formed an organic complex of “mutual promotion and circulation of planting and breeding” through the development of the “Trinity” planting and breeding cycle.



1.3 開展雙碳行動

Carrying out the “Dual-carbon” Project

本公司始終將綠色可持續發展作為核心理念，全面開啓雙碳項目，着手開展碳盤查和認證工作，以進一步確定碳減排目標與願景。同時，各部門積極踐行減碳綠色行動舉措，助力實現「碳達峰，碳中和」的總目標。

The Company always takes green and sustainable development as its core concept. It has fully launched the dual-carbon project, and started to carry out carbon inventory and certification work to further determine the goal and vision of carbon emission reduction. At the same time, various departments are actively implementing green action measures for carbon reduction, helping to achieve the overall goal of “carbon peaking and carbon neutrality”.

- **戰略部署，設立定量碳排目標**
Strategic Deployment and Establishing a Quantitative Carbon Emission Target

2022年，現代牧業啓動「雙碳項目」，設定了至2035年碳強度排放的定量目標。同時，公司將碳排放強度低的萬頭牧場和超大規模牧場樹立成為「碳減排」的典型和明星納入戰略計劃，為低碳和提質增效可協同發展提供有力佐證，堅定行業可持續發展的信心。

In 2022, Modern Dairy launched the Dual-carbon Project, and has also set a quantitative target for carbon intensity emissions by 2035. Modern Dairy has labelled farms with over 10,000 cows and ultra-large-scale farms with low carbon emission intensity as models and stars of “carbon emission reduction” into the strategic plan, aiming to provide strong evidence for the synergistic development of low-carbon and quality improvement and efficiency enhancement and boost the confidence in the sustainable development of the industry.



基準年2021年單位碳排放量：
Unit carbon emissions in 2021 (base year):
0.91 Kg CO₂e/ Kg FRCM



— 碳減排路徑：

Carbon Emission Reduction Path:

提升產奶效率

Improve milk production efficiency

通過提高日單產，減少牛群數量，實現降低碳排放。

Increase daily yield and reduce the number of cattle to achieve lower carbon emissions.

- 產前胚胎移植，替換低產牛群；
Prenatal embryo transfer to replace low-producing herds;
- 產後基因選擇，優化留養效率；
Postpartum genetic selection to optimize retention efficiency;
- 縮短產犢間隔，增加泌乳牛佔比；
Shorter calving intervals to increase the percentage of lactating cows;
- 增加後備牛主動淘汰，提高成母牛比例；
Increase the active elimination of backup cattle to raise the proportion of milkable cows;

調整飼料配方

Adjust feed formulas

通過調整飼料配方減少牛群腸道消化的碳排放；

Adjust feed formulas to reduce carbon emissions from intestinal digestion in cattle;

- 科學配方，實現提高飼料消化率；
Scientific formulas to improve feed digestibility;
- 改變脂肪酸含量，影響瘤胃微生物；
Change fatty acid content to affect rumen microbes;

升級硬件設備

Upgrade hardware equipment

- 感應式風機
Induction fans
- 永磁電機
Permanent magnet motors
- 精準噴淋
Precise spraying
- 節能照明
Energy-saving lighting

提升產能效率

Improve production efficiency

- 提升沼氣發酵效率
Improve biogas fermentation efficiency
- 採用熱電聯產
Combined heat and power

能源結構優化

Energy structure optimization

- 建設光伏和可再生能源替換
Build photovoltaic and renewable energy replacement
- 採用新能源車
New energy vehicles



- 管理提升，「低碳」意識升級
Management Improvement to Upgrade Low-carbon Awareness

為確保「雙碳項目」的有序開展，現代牧業組建了「雙碳項目」行動小組，由公司總裁擔任組長，聯合專業的第三方公司在集團範圍內開展碳排放管理員的培訓，在集團的基層、中層和高層三個維度提高雙碳素養，將可持續發展理念有效滲透到集團管理和業務運營的各個層面。

In order to ensure the orderly development of the “Dual-carbon Project”, Modern Dairy established a “Dual-carbon Project” action team, with the Company’s CEO as the team leader, and cooperated with professional third-party companies to carry out carbon emission administrator training within the Group. In this way, the dual-carbon literacy can be improved in the three dimensions of the Group (namely, the grassroots-level, middle level and high level), and the concept of sustainable development can be effectively penetrated into all levels of the Group’s management and business operations.

現代牧業積極開展碳盤查及第三方認證工作，為邁向低碳發展之路打下了堅實可靠的基礎。2022年我國認監委認證機構－中國船級社質量認證有限公司，依照ISO14064-1:2018標準，對現代牧業溫室氣體排放進行了深度量化和覆核，並頒發認證證書。

Modern Dairy actively carries out carbon inventory and third-party certification, laying a solid and reliable foundation for the road to low-carbon development. In 2022, China Classification Society Quality Assurance Co., Ltd., the certification body of the Certification and Accreditation Administration of the PRC, conducted in-depth quantification and review of Modern Dairy’s greenhouse gas emissions in accordance with the ISO14064-1:2018 standards, and issued a certificate.



- 立足實踐，減排效果明顯
Being Pragmatic and Significant Emission Reduction

現代牧業基於碳排放的實際情況，制定現代牧業「低碳奶牛養殖」全牧場行動方案，通過實測數據，確定中國集約化奶牛養殖條件下非二氧化碳氣體排放因子；研發範圍三的碳排放核算體系，動態評估國內大規模牧場碳排放量。公司已經與國家奶牛產業技術體系達成戰略合作，立足中國的特有養殖模式，與體系一同探索、建立切實符合我國奶業現狀的低碳發展策略，推動全行業低碳發展的進程。

Based on the actual situation of carbon emissions, Modern Dairy formulated the whole-farm action plan of "Low-carbon Dairy Cow Breeding", and determined the non-CO₂ gas emission factors under China's intensive dairy farming conditions through the measured data. It has developed a Scope III carbon emission accounting system and dynamically assessed the carbon emissions of domestic large-scale farms. The Company has reached strategic cooperation with the national dairy industry technology system. Focusing on China's unique breeding models, we will explore and establish low-carbon development strategies that are in line with the current situation of China's dairy industry together with the system, so as to promote the process of low-carbon development of the entire industry.

目前，現代牧業從碳減和碳匯雙側發力，以技術創新為支撐，驅動碳減排目標達成。

At present, Modern Dairy is making efforts from both carbon reduction and carbon sinks, supported by technological innovation, to drive the achievement of carbon emission reduction goals.



- **生物碳減排**：在原有牧場配備完善的自動化糞污收集和封閉式糞便厭氧發酵系統，發酵所得的沼氣可用於產生電力、熱力，減少能源外購和糞便運輸帶來的額外排放。目前，現代牧業49家牧場均配備了完善的糞污處理系統。此外，飼料配方和圈養管理方面採用科學算法和理念，降低牛群腸道發酵的碳排放。

Biological carbon reduction: Install a complete automatic manure collection and closed manure anaerobic fermentation system in the existing farms. The biogas produced by fermentation can be used to generate electricity and heat, reducing additional emissions from energy outsourcing and manure transportation. At present, all 49 farms of Modern Dairy are equipped with complete manure treatment systems. In addition, scientific algorithms and concepts are adopted in feed formulation and captive management to reduce carbon emissions from the intestinal fermentation of cattle.

- **化石碳減排**：建設實施了感應式風機、永磁電機、精準噴淋、節能照明等減排行動。試點牧場結果顯示，感應式風機在春秋季節可省電60%-80%；永磁電機已經全部應用於較小功率的風機和水泵電機，可省電20%；精準噴淋已經應用於4個萬頭牧場，可省電10%，由於進入糞污管理系統的水量減少，節省糞污管理系統耗電量15%；現代牧業有87%的照明已進行改造，計劃2025年完成全部改造，節能照明可省照明電50%。此外，集團布局牧場綜合能源建設，充分利用牧場牛舍頂棚和牧場空餘場地，在牛舍頂棚屋面上鋪設光伏，替代牛舍頂棚材料，降低牧場建設成本，同時解決牧場的部分用電量。

Fossil carbon reduction: We have implemented emission reduction actions such as installing induction fans, permanent magnet motors, precision spraying, and energy-saving lighting. According to the results of pilot farms, 60%-80% of electricity can be saved in spring and autumn by using induction fans; permanent magnet motors have all been used in smaller power fans and pump motors, which can save 20% of electricity; precision spraying has been applied to 4 large-scale farms, which can save 10% of electricity and save 15% of the power consumption of the manure management system due to the reduction of water entering the manure management system; and 87% of the lighting of Modern Dairy has been renovated and all the renovations are scheduled to complete by 2025, which can save 50% of lighting electricity. In addition, the Group plans the comprehensive energy construction of the farm by making full use of the roof of the cowsheds and the vacant space of the farm and laying photovoltaics on the roof of the cowsheds to replace the roof materials of the cowsheds, reduce the construction cost of the farm and provide part of the power consumption of the farm.

- **碳匯**：將綠林固碳納入企業發展規劃，現已推動自有牧場內閑置土地進行植樹固碳，未來將繼續植樹行動，不斷提高企業綠林碳匯能力，為應對全球氣候變化作出積極貢獻。

Carbon sinks: Incorporate the green forest carbon sequestration into the enterprise development planning. Trees have been planted to sequester carbon on the idle land in the self-owned farms. We will continue to plant trees in the future and improve the carbon sink capacity of the Company's green forests, making positive contributions to the response to global climate change.



案例
Case study

低碳合作項目
Low-carbon cooperation projects

- 生物質沼氣發電項目：公司採用RNG熱電聯產模式不斷探索和創新，先後與華蒙科創、江陰牧能、三峽電能等進行生物質能源項目改造合作，公司生物質能源項目全部並網發電後，可實現年發電3.3億度，能源綜合效益顯著提升。同時，成功利用發電機餘熱進行沼渣烘乾，實現增收創收，徹底從「糞污治理」向「清潔增效」轉型。
Power generation projects of biomass biogas: The Company adopts the RNG combined heat and power model to continuously explore and innovate, and has successively cooperated with Huameng Kechuang, Jiangyin Dairy Energy and Three Gorges Power for the transformation of biomass energy projects. After the Company's biomass energy projects are all connected to the grid for power generation, it can achieve an annual power generation of 330 million kWh, and the comprehensive energy benefits will be significantly improved. At the same time, the Company successfully used the waste heat of the generators to dry the biogas residues, which realized the revenue increase and completely transformed from "manure treatment" to "cleaning and efficiency enhancement".
- 光伏發電合作項目：合肥牧場與第三方合作建立6MW分佈式光伏發電電站，2022年度該牧場使用光伏發電7879MWh，利用牧場的資源優勢，實現綠色能源、低碳養殖。
Photovoltaic power generation cooperation projects: Hefei Farm cooperated with third parties to establish a 6MW distributed photovoltaic power station. In 2022, the farm consumed photovoltaic power generation of 7,879MWh, and utilized the resource advantages to realize green energy and low-carbon farming.



表：2022年現代牧業排放物指標
Table: Emission indicators of Modern Dairy of 2022

指標 Indicator	單位 Unit	2022年 2022	2021年 2021
溫室氣體排放總量 ² Total emissions of greenhouse gas ²	tCO ₂ e	2,064,837.92	1,325,668.02
溫室氣體範圍一排放量 Emissions of greenhouse gas (scope I)	tCO ₂ e	1,654,588.91	1,116,991.70
溫室氣體範圍二排放量 Emissions of greenhouse gas (scope II)	tCO ₂ e	410,249.01	208,676.32
百萬營收溫室氣體排放量 ³ Emissions of greenhouse gas per million revenue ³	tCO ₂ e/百萬元 tCO ₂ e/million	167.94	201.24
單位矯正乳碳排放強度 ⁴ Carbon emission intensity per kilogram FPCM ⁴	Kg CO ₂ e/kg FPCM	0.90	0.91

1.4 應對氣候變化 Addressing Climate Change

現代牧業持續關注氣候變化，從建立融合氣候風險的風險管理體系入手，全面開展全價值鏈的氣候風險和機遇的識別，並實施一系列應對氣候變化戰略、措施和行動，為全球氣候治理貢獻力量。

Modern Dairy continues to pay attention to climate change. It starts with the establishment of a risk management system that integrates climate risks, comprehensively carries out the identification of climate risks and opportunities in the entire value chain, and implements a series of strategies, measures and actions to address climate change, contributing to global climate governance.

- ² 溫室氣體排放總量：2022年新收購富源牧場及其他牧場導致溫室氣體排放量增加
Total emissions of greenhouse gas: the newly acquired Fuyuan Farm and other farms in 2022 led to an increase of greenhouse gas emissions
- ³ 百萬營收溫室氣體排放量：飼料業務的銷售收入2022年大幅提升，因此2022年百萬營收溫室氣體排放量大幅降低
Emissions of greenhouse gas per million revenue: the sales revenue of the feed business increased significantly in 2022, so the greenhouse gas emissions per millions revenue in 2022 was greatly reduced
- ⁴ FPCM：代表「脂肪和蛋白質校正乳」，用於比較不同乳脂和蛋白質含量的奶牛之間產奶量的方法
FPCM: it stands for "Fat and Protein Corrected Milk", which is a method used to compare milk production between cows with different milk fat and protein contents

- **氣候風險治理**
Climate Risk Governance

現代牧業遵循COSO(Treadway委員會贊助組織委員會)的五大風險控制管理框架，採取「三道防線」模式，以各牧場總經理為第一道防線，集團風險管理委員會為第二道防線，董事會／審計委員會為第三道防線，共同構建企業風險防禦體系。

Modern Dairy follows the five-major-risk control management frameworks of COSO (Committee of Sponsoring Organizations of the Treadway Committee) and adopts the “three lines of defense” model (that is, the general manager of each farm is the first line of defence, the Group’s risk management committee is the second line of defence, and the Board of Directors/audit committee is the third line of defence) to jointly build an enterprise risk defense system.

公司將氣候風險管理納入全面風險管理，並作為關鍵指標進行價值鏈的合作風險管理與監督。由董事會和高級管理層統籌開展關鍵風險和機遇的識別、分析、應對和監督工作，明確目標和權責。

The Company incorporates climate risk management into its comprehensive risk management, and uses it as a key indicator for cooperative risk management and supervision of the value chain. The identification, analysis, response and supervision of key risks and opportunities are coordinated by the Board of Directors and senior management to clarify objectives and responsibilities.

- **氣候風險識別與管理**
Climate Risk Identification and Management

安全環保部、採購部門和各業務部分別負責自身運營、上游供應鏈以及下游需求方的風險與機遇，由風險管理委員會匯總後，將納入公司的風險評估體系，評估相關風險的可能性和影響。ESG工作組將評估和整合氣候變化導致的物理風險和轉型風險，並將風險識別和評估結果、預期目標和應對計劃報告董事會審議。經討論和批准後，ESG工作組授權並協調專項領導部門和相關部門的相關負責人實施具體的應對措施，以監控目標實現進度和風險應對結果。

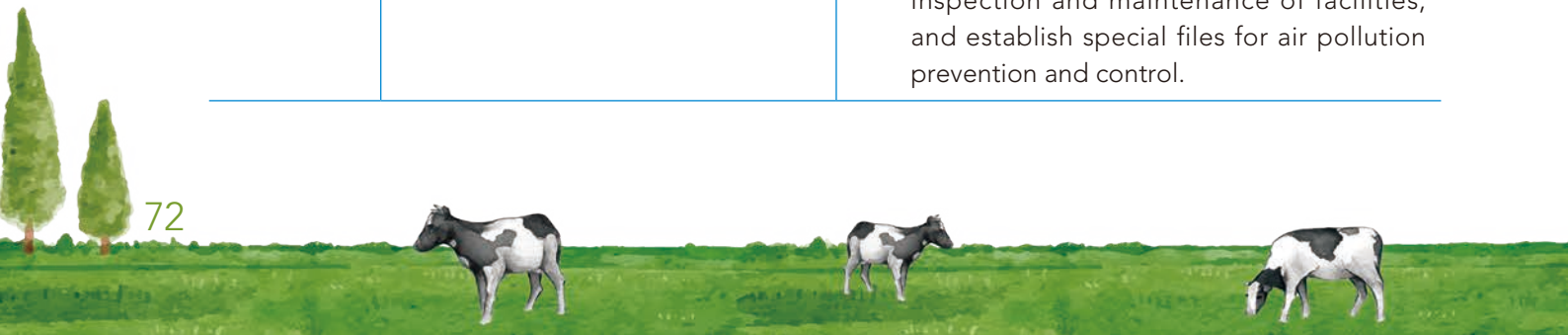
The safety and environmental protection department, the procurement department and each business department are respectively responsible for the risks and opportunities of their own operations, upstream supply chain and downstream demand side. After being summarized by the risk management committee, they will be included in the Company’s risk assessment system to evaluate the possibility and impact of related risks. The ESG working group will assess and integrate the physical and transition risks caused by climate change, and report the risk identification and assessment results, expected goals and response plans to the Board of Directors for consideration. After discussion and approval, the ESG working group will authorize and coordinate the special leading departments and relevant persons in charge of relevant departments to implement specific countermeasures to monitor the progress of goal achievement and risk response results.



氣候變化 風險 Climate Change Risks	風險描述 Risk Description	風險應對 Risk Response
物理風險 Physical Risks		
急性風險 Acute Risks	<p>極端天氣 Extreme weather</p> <ul style="list-style-type: none"> - 極端炎熱和寒冷的天氣導致牛的熱應激和冷應激反應，直接影響產奶量和繁殖率，導致業務中斷。 Extremely hot and cold weather causes heat and cold stress responses in cattle, directly impacting milk production and reproductive rates, leading to business disruption. - 自然災害導致系統性風險，自身運營場所和供應商均會受到直接損失。 Natural disasters will lead to systemic risks, and both their own operating sites and suppliers will suffer direct losses. 	<ul style="list-style-type: none"> • 極寒天氣：使用保溫燈或暖風機，提高暫存欄溫度；為犢牛提供禦寒馬甲。 Extremely cold weather: Use heat lamps or fan heaters to raise the temperature of the stalls and provide thermal vests for the calves. • 酷暑天氣：進一步完善牛棚冷卻系統，阻斷外部熱源進入牛棚和運動場，促進牛棚內的熱量和水分排到室外。 Hot weather: Further improve the cooling system of the cowshed, block the external heat source from entering the cowshed and sports field, and promote the heat and moisture in the cowshed to be discharged to the outside. • 供應鏈中斷：加快海外布局，以防任何一方遭受極端天氣狀況影響。 Supply chain disruption: Speed up overseas deployment to prevent any party from being affected by extreme weather conditions.



氣候變化 風險 Climate Change Risks	風險描述 Risk Description	風險應對 Risk Response
		<ul style="list-style-type: none"> <p>• 員工健康安全：制定應急預案，明確應急處置流程，提升對災害天氣的防範意識及抵禦的能力。</p> <p>Health and safety of employees: Formulate an emergency plan and clarify the emergency response process to improve the awareness of prevention and the ability to resist disaster weather.</p> <p>• 自然災害：在特殊時段下發專項方案，對極端天氣提出明確管理標準及要求。從風險評估與資源調查、信息監測與預警、應急響應與處置、災後監測與恢復幾方面做出部署。</p> <p>Natural disasters: Issue special plans during special periods, and put forward clear management standards and requirements for extreme weather. Deployment is made in terms of risk assessment and resource investigation, information monitoring and early warning, emergency response and disposal, post-disaster monitoring and recovery.</p> <p>• 大氣污染：為有效防控因氣候變化導致的大氣污染防，建立分級管控區域、確定治理措施、落實設施的檢查維保，建立大氣污染防治專項檔案。</p> <p>Air pollution: In order to effectively prevent and control air pollution caused by climate change, establish hierarchical control areas, determine control measures, implement inspection and maintenance of facilities, and establish special files for air pollution prevention and control.</p>

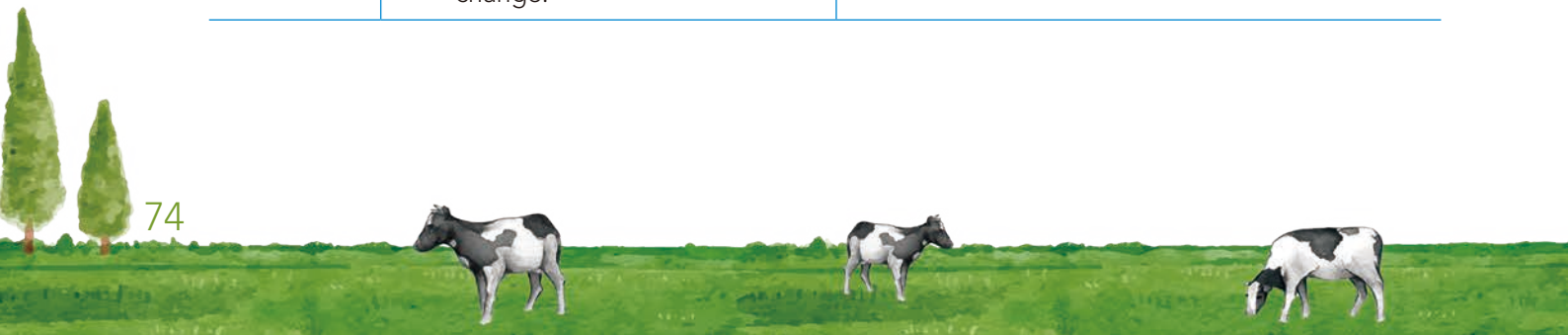


氣候變化 風險 Climate Change Risks	風險描述 Risk Description	風險應對 Risk Response
慢性風險 Chronic Risks	氣候變暖 Global warming – 生鮮乳製品易受外部溫度影響，從而增加食品安全危害。 Fresh dairy products are susceptible to external temperature, which increases food safety hazards.	<ul style="list-style-type: none"> 合理調配運輸，盡量縮短運輸時間；加強到場環節產品質量的監控和檢測。 Reasonable deployment of transportation to minimize transportation time and strengthen the monitoring and testing of product quality in the on-site link.

轉型風險 Transition Risks

政策和 法律 Policies and Laws	環境信息披露 Environmental information disclosure – 信息披露程度的提高，監管對信息披露真實性和合規性的監管將更加嚴格。不當的信息披露會導致信用風險。 The degree of information disclosure will increase, and the supervision on the authenticity and compliance of information disclosure will be stricter. Improper information disclosure can lead to credit risk.	<ul style="list-style-type: none"> 啓動「雙碳戰略項目」，開展碳盤查工作和第三方認證，提高數據的準確性和認可度。同時建立碳庫存計算模型，加強碳排放數據的透明度和可追溯性。 Launch the “Dual-carbon Strategic Project” to carry out carbon inventory and third-party certification to improve the accuracy and recognition of data. At the same time, a carbon inventory calculation model will be established to enhance the transparency and traceability of carbon emission data.
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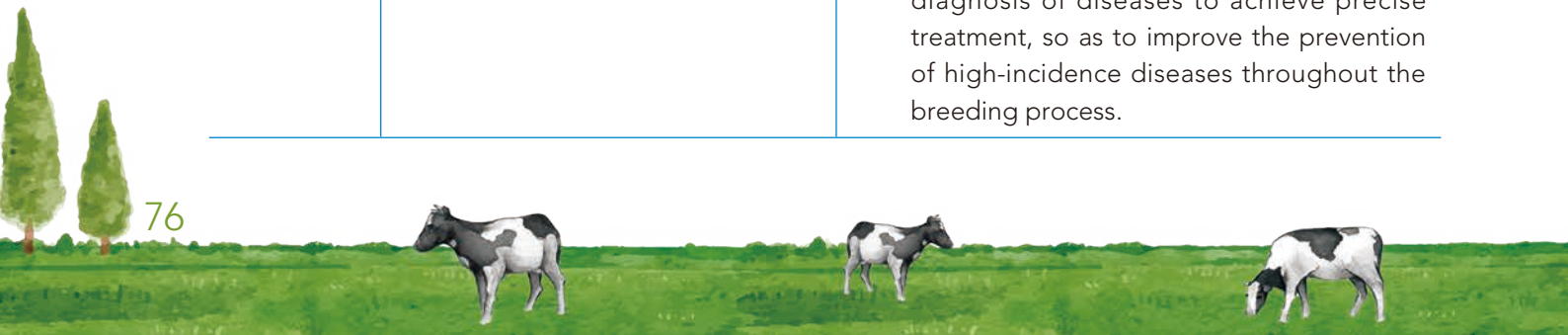
氣候變化 風險 Climate Change Risks	風險描述 Risk Description	風險應對 Risk Response
	<p>日益嚴格的環境監管 Increasingly stringent environmental regulation</p> <ul style="list-style-type: none"> - 碳交易市場規模擴大，被納入碳市場後，環境績效成本增加財務風險。 The scale of the carbon trading market has expanded, and after being included in the carbon market, the cost of environmental performance will increase financial risks. - 中國自提出「雙碳」戰略以來，已於多份文件中提及推動碳稅制度落地。 Since proposing the “dual carbon” strategy, China has mentioned in several documents the implementation of the carbon tax system. 	<ul style="list-style-type: none"> • 大力發展低碳轉型，積極優化能源使用結構，以生物質能源替代和化石能源；通過節能技改，降低能耗；優化飼料結構和飼養技術，減少腸道發酵和糞便處理產生的溫室氣體排放；優化畜群結構，創建低碳、高福利和高效率的畜群。 Vigorously develop low-carbon transformation, actively optimize the structure of energy use, and replace fossil energy with biomass energy; reduce energy consumption through energy-saving technological transformation; optimize feed structure and feeding techniques to reduce greenhouse gas emissions from enteric fermentation and manure handling; and optimize herd structure to create low-carbon, high-welfare and efficient herds.
市場 Market	<p>資本市場關注提升 Increased attention from the capital market</p> <ul style="list-style-type: none"> - 投資者關注被投企業在氣候變化方面的績效表現。 Investors are concerned about the performance of investee companies in terms of climate change. 	<ul style="list-style-type: none"> • 主動回應國際普遍認可的評級，展現關鍵績效表現。 Proactively respond to internationally recognized ratings and demonstrate key performance.



氣候變化 風險 Climate Change Risks	風險描述 Risk Description	風險應對 Risk Response
	<p>飼料等原材料價格波動 Price fluctuations of feed and other raw materials</p> <p>— 特殊因素的影響，如災害性天氣，導致農產品種植成本風險上升。 The impact of special factors, such as disastrous weather, will lead to an increase in the risk of agricultural products' planting costs.</p>	<ul style="list-style-type: none"> • 創新「牧草種植、奶牛養殖、牛奶加工一體化」全產業鏈模式，有效保證飼草料供應；公司在遵循本地化採購政策的同時，全面聯動各地供應商，保證應急供應；制定戰略儲備與集中儲備計劃，避免出現因氣候變化造成的供應中斷情況；定期舉行大宗原料行情分析會，分析因氣候變化帶來的市場行情波動，從而更好地把握採購節點，降低因氣候變化造成的飼料供應價格波動風險。 Innovate the production model of “integration of forage planting, dairy farming and milk processing” that covers the whole industry chain to effectively ensure the supply of forage. While following the localized procurement policy, the Company comprehensively links suppliers from all over the world to ensure emergency supply. The Company develops a strategic plan for centralized reserves to avoid supply disruptions due to climate change. Regularly hold market analysis meetings for bulk raw materials to analyze market fluctuations caused by climate change, so as to better grasp the procurement node and reduce the risk of price fluctuations in feed supply caused by climate change.



氣候變化 風險 Climate Change Risks	風險描述 Risk Description	風險應對 Risk Response
	<p>獸醫和藥品成本增加 Increased veterinary and pharmaceutical costs</p> <ul style="list-style-type: none"> 全球氣候變暖影響媒介源性人獸共患病發生率上升，藥品和獸醫需求上漲。 Global warming affects the increase in the incidence of vector-borne zoonotic diseases, leading to an increase in the demand for pharmaceuticals and veterinary medicine. 	<ul style="list-style-type: none"> 採購部與各職能部門共同討論、修訂和完善藥品採購目錄，定期對同類藥品進行試驗對比分析，優選可替代藥品，並將可滿足使用需求的藥品種類納入到採購目錄中，與藥品供應商建立長期採購合作，降低藥品價格波動影響；加強獸醫人才儲備隊伍，保證各牧場獸醫配備；根據氣候變化情況實時監測奶牛健康狀況，採取有效措施降低奶牛相關發病率，從源頭減少藥品使用；研發疾病早期診斷智能技術與裝備、實現精準治療，從而提高養殖全程的高發疾病的預防。 The Purchasing Department, together with other functional departments, discusses, revises and improves the drug procurement catalogue and conducts tests and comparative analysis of similar drugs on a regular basis to select alternative drugs. They will include the types of drugs that can meet the needs of use in the procurement catalogue, and establish long-term procurement cooperation with drug suppliers to reduce the impact of drug price fluctuations. We will strengthen the veterinary talent reserve team to ensure that each farm is equipped with veterinarians, and take effective measures according to the climate change situation and real-time monitoring of the health status of dairy cows to reduce the incidence of dairy cows and reduce the use of drugs from the source. Research and develop intelligent technology and equipment for early diagnosis of diseases to achieve precise treatment, so as to improve the prevention of high-incidence diseases throughout the breeding process.



氣候變化機遇 Opportunities from Climate Change	機遇描述 Opportunity Description
效率、創新、市場機遇 Efficiency, Innovation and Market Opportunities	<ul style="list-style-type: none"> 各農場開展技術改造項目。全面智能化建設提升牧場生產效率，有效降低能源浪費。 Various farms carry out technological transformation projects. Comprehensive intelligent construction improves the production efficiency of farms and effectively reduces energy waste.
	<ul style="list-style-type: none"> 積極優化能源使用結構，推廣清潔能源使用，增加投入綜合能源建設，實現綠電自用，可應對能源價格上漲，降低生產成本。 Actively optimize the structure of energy use, promote the use of clean energy, and increase investment in comprehensive energy construction to achieve self-use of green electricity, cope with rising energy prices and reduce production costs.
	<ul style="list-style-type: none"> 構建「飼草種植 – 奶牛養殖 – 糞污處理 – 沼肥還田(沼氣發電) – 飼草種植」的綠色循環產業鏈，實現沼氣發電、固體糞回收和有機肥還田的綜合利用，減少碳排放。並且可在碳市場提供有償碳配額，產生環境收益。 Construct a green circular industrial chain of “Forage Planting – Cow Breeding – Manure Treatment – Soil Fertilization with Organic Waste (power generation with biogas) – Forage Planting” to realize the comprehensive utilization of biogas power generation, solid manure recovery and organic fertilizer return to the field, thereby reducing carbon emissions. Providing paid carbon allowances in the carbon market can also generate environmental benefits.
	<ul style="list-style-type: none"> 利用沼氣發電，發電機可以與國家電網連接供電，為進入可再生電力市場等新市場帶來機會，並創造新的收入增長點。 Generate electricity from biogas. Generators can be connected to the national grid to provide electricity, opening opportunities to enter new markets such as renewable electricity markets, and creating new sources of revenue growth.



1.5 踐行綠色運營

Practicing Green Operation

現代牧業勇做綠色踐行者，將綠色發展理念貫穿整個生產過程，通過技術改造、管理降碳為路徑，實現節能減排成效最大化，形成綠色低碳核心競爭優勢。

Modern Dairy bravely acts as a green practitioner and runs the concept of green development throughout the entire production process, and through technological transformation, management and carbon reduction as the path, it strives to maximize the effectiveness of energy conservation and emission reduction, forming a green and low-carbon core competitive advantage.

- 環境管理體系
Environmental Management System

2022年現代牧業公開承諾環境可持續性運營，鼓勵支持合作夥伴遵循環境友好的發展核心，不斷探索長期可持續發展的解決方案，減少碳足跡。

In 2022, Modern Dairy publicly committed to environmentally sustainable operations, and encouraged and supported partners to follow the core of environmentally friendly development, so as to continuously explore solutions for long-term sustainable development and reduce carbon footprints.

公司依據ISO 14001標準建立科學的環境管理體系，全面提升各牧場環境管理水平，推進節約資源、提高效益、降低風險。目前已有26家法人單位(31個規模牧場)取得ISO 14001環境管理體系認證。

The Company has established a scientific environmental management system based on the ISO 14001 standards, aiming to comprehensively improve the environmental management level of each farm, promote resource conservation, improve efficiency, and reduce risks. At present, 26 legal entities (31 large-scale farms) have obtained ISO 14001 environmental management system certification.



- **污染物排放管理**
Pollutant Discharge Management

公司嚴格遵循《中華人民共和國環境保護法》、《中華人民共和國大氣污染防治法》、《中華人民共和國水污染防治法》、《中華人民共和國固體廢物污染環境防治法》等法律和《城鎮排水與污水處理條例》、《水污染防治法實施細則》、《消耗臭氧層物質管理條例》、《畜禽規模養殖污染防治條例》等行政法規，制定《廢油回收管理制度》等內部管理制度。以精準治污、科學治污、依法治污為工作方針，採取源頭禁限、過程減排、末端治理的全過程環境風險管控措施。

The Company strictly abides by laws such as the Environmental Protection Law of the People's Republic of China, the Law of the People's Republic of China on the Prevention and Control of Air Pollution, the Law of the People's Republic of China on the Prevention and Control of Water Pollution, the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste and administrative regulations such as the Regulations on Urban Drainage and Sewage Treatment, the Rules for the Implementation of the Law on the Prevention and Control of Water Pollution, the Regulations on the Administration of Ozone Depleting Substances, the Regulations on the Prevention and Control of Pollution from Large-scale Livestock and Poultry Breeding, and has formulated internal management systems such as the Waste Oil Recovery Management System. Taking precise pollution control, scientific pollution control and pollution control according to the law as the working policy, the whole process of environmental risk management and control measures is adopted, including source prohibition, process emission reduction and terminal treatment.

公司制定了以下廢棄物減排目標：

The Company set the following emission reduction targets for waste:

<p>有害廢棄物減排目標 Hazardous waste emission reduction targets</p>	<p>以2020年為基準，到2025年，實現原料原奶品質控制檢測產生廢物總量降低10%；到2030年，實現原料原奶品質控制檢測產生廢物總量降低25%。</p> <p>Taking 2020 as the benchmark, by 2025, reduce the total amount of waste generated by quality control and testing of raw materials and raw milk by 10%; and by 2030, reduce the total amount of waste generated by quality control and testing of raw materials and raw milk by 25%.</p>
<p>污水 Sewage</p>	<p>廢水在內部進行回收處理，公司不涉及廢水排放。</p> <p>All sewage is recycled internally, and the Company does not involve in the sewage discharge.</p> <ul style="list-style-type: none">- 對於生活污水，經過中水站處理後用於牛舍清洗、灌溉、降溫等；施工區設置臨時旱廁，定期由當地環衛部門清運。 After being treated by the reclaimed water station, the domestic sewage will be used for cowshed cleaning, irrigation, and cooling. Temporary dry toilets will be set up in the construction area, which will be regularly removed by the local sanitation department.- 各牧場場區實行嚴格的雨污分流措施，收集的後期雨水直接排到附近溝塘或農田，收集的污水集中處理，並入糞道，稀釋沼液，與沼液一同發酵。 Strict rainwater and sewage diversion measures are implemented in each farm area. The collected rainwater is directly discharged to nearby ditches or farmlands, while the collected sewage is treated centrally and merged into the manure channel to dilute the biogas slurry and ferment together with the biogas slurry.



	<p>- 施工區通過採取嚴格避免施工區域內沖洗機械設備和運輸車輛；下雨時用帆布遮蓋；對機械設備定期維護等防治措施，最大限度地杜絕跑冒滴漏含油廢水，避免泥沙懸浮顆粒和礦物油等污染源。對於無法避免的少量廢水，進行合規處理，保證無害後，進行臨時排放。</p> <p>Strictly avoid washing mechanical equipment and transport vehicles in the construction area, and cover them with canvas when it rains. Regular maintenance of mechanical equipment and other prevention and control measures should be taken to prevent oily wastewater from running, emitting, dripping, and leaking to the greatest extent, and pollution sources such as suspended particles of sediment and mineral oil should be avoided. For a small amount of unavoidable sewage, it shall be treated in compliance with regulations and be discharged temporarily after ensuring that it is harmless.</p>
<p>廢氣 Exhaust gases</p>	<p>全面管控場內有組織和無組織排放源，落實《大氣污染防治十條準則》要求，建立分級管控區域，在流程上按照「大氣污染防治執行程序圖」有序並持續開展治理工作，建立大氣污染防治專項檔案為合規管理留痕，從而有效防控大氣污染，實現牧場大氣污染防治合規管理的最終目標。</p> <p>Comprehensively control organized and unorganized emission sources in the site, implement the requirements of the Ten Guidelines for Air Pollution Prevention and Control and establish hierarchical control areas. In terms of the process, follow the “Air Pollution Prevention and Control Execution Procedure Chart” to carry out orderly and continuous governance work, and establish a special file for air pollution prevention and control to leave traces for compliance management, thus effectively preventing and controlling air pollution and achieving the ultimate goal of compliance management of air pollution prevention and control in farms.</p>



	<p>廢氣排放主要來源包括煤炭、生物質及天然氣使用產生的氮氧化物、二氧化硫等氣體排放。</p> <p>The main sources of exhaust gas emissions include nitrogen oxides, sulfur dioxide and other gas emissions from the use of coal, biomass and natural gas.</p> <ul style="list-style-type: none"> - 來自牛舍、沼氣站和供熱鍋爐等單元的廢氣經脫硫等處理後達標排放，從而減少廢氣排放。 Waste gas from cowsheds, biogas stations and heating boilers can be discharged only after desulfurization and other treatments meet the standards, thereby reducing waste gas emissions. - 對各牧場的供暖鍋爐進行升級改造，並逐漸關閉燃煤鍋爐，用更清潔高效的燃氣鍋爐或生物質鍋爐替代，逐步提高對沼氣的利用水平。 Upgrade the heating boilers of farms, and gradually close coal-fired boilers and replace them with cleaner and more efficient gas-fired boilers or biomass boilers to gradually improve the utilization level of biogas.
<p>糞污 Manure</p>	<p>源頭減量控制糞污排放，從而降低後續糞污處理利用壓力，減少糞污處理和資源化利用配套設施。通過在保證動物生產性能的情況下，加強科學的飼料配制技術和生物技術，如選擇高消化、高吸收的原料，明顯提高飼料中營養物質利用率，降低牧場牛糞的排放量。</p> <p>Reduce the amount of manure at the source to control the discharge of manure, thereby reducing the pressure of subsequent manure treatment and utilization, and reducing the supporting facilities for manure treatment and resource utilization. By strengthening scientific feed preparation technology and biotechnology while ensuring s' production performance, such as selecting high-digestion and high-absorption raw materials, the utilization rate of nutrients in feed will be significantly improved, so as to reduce the discharge of cow dung in farms.</p>



有害廢棄物
Hazardous waste

- 優化化驗所用試劑瓶容量，最大限度減少試劑瓶的使用；同時規定醫療垃圾及化驗所用試劑瓶儲存標準，建立廢棄物台賬並向環保部門備案，並按照《中華人民共和國固定廢物污染環境防治法》將有害廢棄物交予具有資質的處理單位進行集中處理。
Optimize the volume of reagent bottles used in the assay to minimize the use of reagent bottles, stipulate the storage standards for medical waste and reagent bottles used in laboratories, establish a waste ledger and file with the environmental protection department, and hand over hazardous waste to qualified processing units for centralized treatment in accordance with the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste.
- 制定並實施《廢油回收管理制度》，將廢油料交由具有回收資質的公司妥善處理。
Formulate and implement the Waste Oil Recovery Management System and hand over waste oil to companies with recycling qualifications for proper disposal.
- 對於病死及病害牛，我們嚴格遵照《中華人民共和國病死及死因不明動物處置辦法》及農業部《病死及病害動物無害化技術規範》等，按照處理流程標準進行相應方法的處置或委託有資質單位進行無害化處理，防止對環境造成危害以及被惡意利用。
For dead and diseased cattle, we strictly abide by the Measures of the People's Republic of China on the Disposal of Dead Animals and Unknown Causes of Death and the Technical Specifications for the Harmless Treatment of Dead and Diseased Animals issued by the Ministry of Agriculture, and carry out corresponding disposal methods in accordance with the treatment process and standards or entrust a qualified unit for harmless disposal to prevent harm to the environment and malicious use.

無害廢棄物

Non-hazardous waste

- 將煤渣全部回收利用，填平牧場道路或場地坑窪的部分。
All the cinders are recycled and used to fill in the farm roads or potholes in the site.
- 將沼渣全部回收利用。使用臥床拋料車回填於牛舍內的臥床，通過定期翻創並補充沼渣來改善牛舍臥床環境，其殺菌效果、舒適度及經濟成本遠遠優於其他墊料。
All biogas residues are recycled, and are backfilled to the bed in the barn using a bedding thrower. The bedding is regularly turned and replenished to improve the bedding condition, with its bactericidal effect, comfort and economic cost far better than other bedding materials.
- 對生活垃圾進行分類，加強對員工在垃圾分類、回收方面的宣傳，加強環保意識。
Sort domestic waste, strengthen publicity for employees on waste classification and recycling, and increase environmental protection awareness.



案例
Case study

中溫厭氧發酵糞污處理系統獲UNGC認可

The mesophilic anaerobic fermentation manure treatment system has been approved by UNGC

聯合國全球契約組織(UNGC)官方發佈《踐行全球發展倡議，加速2030年可持續發展議程：企業「碳中和」目標設定、及全球合作》。報告中，現代牧業集團作為降低養殖活動碳排放在農業食品行業的優秀案例舉措被予以重點介紹。

The United Nations Global Compact (UNGC) officially released the Practicing the Global Development Initiative and Accelerating the 2030 Agenda for Sustainable Development: Corporate "Carbon Neutral" Target Setting and Global Cooperation. In the report, Modern Dairy Group was highlighted as an excellent case of reducing carbon emissions from farming activities in the agri-food industry.

現代牧業在國內首創提出了「糞污資源化利用」理念，循環糞污處理系統通過沼渣回收用於替代外購墊料、沼氣收集轉化代替外購電能和熱能、沼液還田，形成內循環並減少對環境的影響，整體上糞便管理和能源利用環節相較於其他處理系統，可降低40%以上的碳排放。

Modern Dairy is the first to put forward the concept of "resource-based utilization of manure" in China. The circulating manure treatment system uses biogas residue recovered to replace purchased bedding materials, biogas collection and transformation to replace purchased electric energy and heat energy, and biogas slurry to field, forming an internal cycle and reducing the impact on the environment. Overall, compared with other treatment systems, manure management and energy utilization can reduce carbon emissions by more than 40%.

本次UNGC報告中評價現代牧業集團糞污資源化利用系統是一種更加安全、更加環保、更加經濟的均衡可持續發展模式。中國沼氣學會碳中和專委會主任、國際標準化組織沼氣技術委員會主席董仁杰教授對此處理系統在實現環境友好、降本增效、副產物利用更加多元化等方面的創新突破給予了高度評價。

In this UNGC report, it is evaluated that Modern Dairy Group's manure resource-based utilization system is a safer, more environmentally friendly and more economical balanced sustainable development model. Professor Dong Renjie, director of the Carbon Neutral Committee of the China Biogas Society and chairman of the Biogas Technical Committee of the International Organization for Standardization, spoke highly of the innovative breakthroughs of this treatment system in terms of environmental friendliness, cost reduction and efficiency increase, and more diversified use of by-products.



表：2022年現代牧業排放物指標
Table: Emission indicators of Modern Dairy of 2022

指標 Indicator	單位 Unit	2022年 2022	2021年 2021
主要危險廢棄物產生量 ⁵ Production of major hazardous waste ⁵	噸 tons	267.24	136.10
百萬營收主要危險廢棄物產生量 Production of major hazardous waste per million revenue	千克/百萬元 kg/million	21.74	20.66
病死牛無害化處理牛 Harmless disposal of cows died due to diseases	頭 heads	14,396	11,591
無害廢棄物產生量 ⁶ Amount of non-hazardous waste generated ⁶	噸 tons	462.15	954.90
百萬營收無害廢棄物產生量 Non-hazardous waste generated per million revenue	千克/百萬元 kg/million	37.59	140
廢氣中NO _x 排放量 NO _x emissions in exhaust gas	噸 tons	114.28	151.53
廢氣中SO ₂ 排放量 ⁷ SO ₂ emissions in exhaust gas ⁷	噸 tons	46.26	68.69
廢氣中煙塵排放量 ⁸ Soot emissions in exhaust gas ⁸	噸 tons	0.02	0.21
廢水排放量 ⁹ Sewage discharge ⁹	噸 tons	493,480	1,375,000
廢水回收量 ¹⁰ Sewage recycle ¹⁰	噸 tons	493,480	1,375,000

⁵ 主要危險廢棄物產生量：2022年新增23個牧場導致主要危險廢棄物產生量增加
Production of major hazardous waste: The addition of 23 new farms in 2022 results in an increase in major hazardous waste generation

⁶ 無害廢棄物產生量：2022年通遼牧場通過改造生物質顆粒鍋爐、阜民丰牧場使用空氣熱泵供暖，故無害廢棄物產生量減少
Amount of non-hazardous waste generated: In 2022, Tongliao Farm transformed the biomass pellet boilers and Fuminfeng Farm used air heat pumps for heating, so the generation of non-hazardous waste was reduced

⁷ 廢棄種SO₂排放量：2022年通遼牧場通過改造生物質顆粒鍋爐、阜民丰牧場使用空氣熱泵供暖，故廢氣中SO₂排放量減少
SO₂ emissions in exhaust gas: In 2022, Tongliao Farm transformed the biomass pellet boilers and Fuminfeng Farm used air heat pumps for heating, so the SO₂ emissions in exhaust gas was reduced

⁸ 廢氣中煙塵排放量：2022年通遼牧場通過改造生物質顆粒鍋爐、阜民丰牧場使用空氣熱泵供暖，故廢氣中煙塵排放量減少
Soot emissions in exhaust gas: In 2022, Tongliao Farm transformed the biomass pellet boilers and Fuminfeng Farm used air heat pumps for heating, so the soot emissions in exhaust gas was reduced

⁹ 廢水排放量：2022年牧場通過優化奶廳清洗流程，故廢水排放量下降
Sewage discharge: In 2022, the farms optimized the cleaning process of the dairy parlor, so the discharge of wastewater decreased

¹⁰ 廢水回收量：2022年牧場廢水全部回收用於衝洗待擠區
Sewage recycle: In 2022, all farm wastewater was recycled for flushing the waiting areas



- **能源管理**
Energy Management

公司建立《現代牧業能源系統管理制度》、《燃油管理制度》等制度，以節能技術改造作為實現節能降耗的長期途徑，推廣省能設備，改造耗能工藝設備，提高用能技術水平。同時積極發展可再生能源事業，促進能源結構的優化，調整能源結構。

The Company has formulated the Energy System Management System of Modern Dairy, the Fuel Management System and other systems, and will take the transformation of energy-saving technology as a long-term way to save energy and reduce consumption, promote energy-saving equipment, and transform energy-consuming process equipment to improve the level of energy-using technology. Meanwhile, the Company actively develops the renewable energy business, promotes the optimization of the energy structure, and adjusts the energy structure.

為持續監控資源使用情況，進一步強化低碳環保運營水平，公司對資源消耗數據走勢進行分析，制定了相對科學的降耗目標：

In order to continuously monitor the use of resources and further strengthen the level of low-carbon and environmental protection operations, the Company analyzes the trend of resource consumption data and formulates scientific consumption reduction goals:

<p>降低能耗目標 Energy reduction target</p>	<p>– 以2020年為基準，到2030年，逐年降低單噸產品電耗、單噸天然氣、單噸蒸汽耗用，並限定目標值。 Taking 2020 as the benchmark, by 2030, we will reduce the power consumption per ton of products, natural gas per ton and steam consumption per ton year by year, and set target values.</p>
<p>降低水耗目標 Water reduction target</p>	<p>– 以2020年為基準，未來5年，單頭牛用水量標準保持在110kg以內的水平，並逐步推廣節水技改項目的使用。 Taking 2020 as the benchmark, in the next five years, the standard of water consumption per cow will be kept within 110kg, and the use of water-saving technical transformation projects will be gradually promoted.</p>

為提高能源使用效率，實現降耗目標，公司不斷探索更加有效的節能方法與技術，同時擴大設備優化升級改造範圍。公司積極實施了以下節能降耗舉措，並在所有相關運營地實行節能優化措施：

In order to improve the efficiency of energy use and achieve the goal of reducing consumption, the Company continuously explores more effective energy-saving methods and technologies, and at the same time expands the scope of equipment optimization and upgrading. The Company has actively implemented the following energy-saving and consumption-reducing measures, and strives to implement energy-saving optimization measures in all relevant operations:



能源類型 Type of energy	節能措施 Energy-saving measures
電 Electricity	<p>節能改造： Energy-saving renovation:</p> <ul style="list-style-type: none"> <li> <p>– 封閉式牛舍屋頂的彩鋼瓦替換為陽光板，延長採光時間，降低照明燈的使用。 The color steel tiles on the roof of the closed cowshed are replaced with solar panels to extend the lighting time and reduce the use of lighting.</p> <li> <p>– 智能化改造辦公區和各牧場常亮燈，安裝紅外感應、感光開關。目前，現代牧業87%的照明已進行改造，計劃2025年完成全部改造。 Intelligently transform the constant lights in the office areas and each farm, and install infrared and photosensitive switches. At present, 87% of the lighting of Modern Dairy has been renovated, and it is difficult to complete all the renovations in 2025 as planned.</p> <li> <p>– 各牧場安裝浮球簡式液位開關、遠程控制、時控開關多種控制方式，避免泵類空轉而造成過度耗電，減少能源浪費。 Various control methods such as floating ball simple liquid level switch, remote control and time control switch are installed in each farm to avoid excessive power consumption caused by idling pumps and reduce energy waste.</p> <li> <p>– 開展永磁電機技術實踐，將牛舍風機原使用的三相異步電動機替換為KM-90S-1500型1.1KW稀土永磁節能電機，在同樣轉速的情況下，永磁節能電機可節省37%的耗電量。永磁電機已經全部應用於較小功率的風機和水泵電機，總計可省電20%。 Carry out the technical practice of permanent magnet motors, and replace the original three-phase asynchronous motors used in the cowshed fan with KM-90S-1500 type 1.1KW rare earth permanent magnet energy-saving motors. At the same speed, the permanent magnet energy-saving motors can save 37% of power consumption. Permanent magnet motors have all been used in smaller power fans and pump motors, which can save electricity by 20% in total.</p>



能源類型 Type of energy	節能措施 Energy-saving measures
	<p>管理節能： Energy-saving management:</p> <ul style="list-style-type: none"> <li> - 推廣綠色辦公，明確規定全體員工在辦公地點的私人用電標準；配備專門人員檢查下班後辦公設備的關閉情況。 Promote green office. Stipulate the private electricity standards for all employees in the office and assign special personnel to check the closing of office equipment after getting off work. <li> - 牛舍內安裝的負壓風機安裝智能控制系統，通過採集牛舍內溫度、空氣質量、濕度進行自動分析反饋給智能模塊，以達到THI指標為標準，模塊自動分配風機開啓比例。 The negative pressure fan installed in the barn is equipped with an intelligent control system, which automatically analyzes and feeds back to the intelligent module by collecting the temperature, air quality, and humidity in the barn. The module automatically assigns the fan opening ratio to meet the THI index.



能源類型 Type of energy	節能措施 Energy-saving measures
	<p>技術節能： Energy-saving technology:</p> <ul style="list-style-type: none"> - 提升沼氣發電量，科學有序推進糞污資源化利用工作，加快畜禽糞污資源化利用先進技術和裝備研發，採用全量收集利用畜禽糞污、全量機械化施用等經濟高效的糞污資源化利用技術模式。所有牧場均實現了糞污的無害化及資源化利用，2022年沼氣產生量1,1232.531萬立方米，發電24,003,720度，產出蒸汽370,828.51噸，產生沼渣2,296,020立方米並全部回收，作為墊料使用。 Increase biogas power generation. Scientifically and orderly promote the resource utilization of manure, accelerate the research and development of advanced technologies and equipment for the resource utilization of livestock and poultry manure, and adopt economical and efficient manure resource utilization technology models such as full collection and utilization of livestock and poultry manure and full mechanized application. At present, all farms have realized the harmless and resource-based utilization of manure. In 2022, the biogas production was 112.32531 million cubic meters, power generation was 24,003,720 kWh, steam output was 370,828.51 tons, and 2,296,020 cubic meters of biogas residues were produced and all were recycled for use as bedding materials.
	<ul style="list-style-type: none"> - 使用清潔能源，充分利用牧場牛舍頂棚和牧場空餘場地，在牛舍頂棚屋面上鋪設光伏，替代牛舍頂棚材料，解決牧場的部分用電量，總計劃裝機容量不低於500兆瓦。 Use clean energy. Make full use of the roof of the cowshed and the vacant space of the farm, and lay photovoltaics on the roof of the cowshed to replace the materials of the roof of the cowshed to provide part of the power consumption of the farm. The total planned installed capacity was not less than 500 megawatts.



能源類型 Type of energy	節能措施 Energy-saving measures
煤 Coal	<ul style="list-style-type: none"> <li>- 在各牧場的運營中逐步取消燃煤鍋爐使用，改用沼氣、天然氣鍋爐供暖，從源頭降低煤炭使用量。 In the operation of each farm, the coal-fired boilers will be gradually eliminated, and biogas and natural gas boilers are used for heating, so as to reduce the consumption of coal from the source. <li>- 在各牧場的運營中將小奶廳巴殺機改造為電巴殺機，熱水改為太陽能加熱，做到煤炭零使用。 Sterilizer for small milking parlors is changed into electric sterilizer, and use solar power to heat water, striving to achieve zero use of coal. <li>- 根據氣溫對生活區域進行供暖，通過APP自動調節換熱機組回水溫度，將宿舍溫度控制在18℃-23℃，減少不必要的消耗。 Heat the living areas according to the air temperature, automatically adjust the reclaimed water temperature of the heating exchange unit through the APP and set the temperature for the dormitory at 18-23℃, so as to reduce unnecessary consumption.
燃油 Fuel	<ul style="list-style-type: none"> <li>- 將生活區柴油鍋爐改造為太陽能取暖，節能環保，降低成本。 The diesel boilers in the living areas are transformed into solar heating, which saves energy and is environmental-friendly while reducing costs. <li>- 撒料用車耗油量高，通過調整原料存放位置，調整上料順序，減少車輛在攪拌站的行駛距離及種牛舍撒料次數，減少車輛撒料次數，有效節省油耗。 The fuel consumption of the vehicle for spreading feeds is high. By adjusting the storage position of raw materials and the order of the feeds, the driving distance of the vehicle at the mixing station, the frequency of material spreading in the breeding barn and the number of times of vehicle spreading feeds can be reduced to effectively save fuel consumption. <li>- 對車輛噴油器以及油泵進行校驗，調至標準噴油量。 Check the fuel injector and fuel pump of vehicles and adjust them to the standard fuel injection volume.



- 水資源管理
Water Management

現代牧業高度重視運營地的水資源保護，堅持人水和諧，平衡開發和保護。強化水壓力風險管理，嚴格監控用水目標進展，全面提高用水效率。

Modern Dairy attaches great importance to the protection of water resources in the place of operation, adheres to the harmony between human and water, and balances development and protection. It strengthens water stress risk management and strictly monitors the progress of water use targets to improve water use efficiency in an all-round way.

集團層面制定《指標綜合評比管理制度》，將年度用水預算1,687.6萬噸和單頭牛用水量110kg納入年度部門和責任主管的指標綜合排名考核辦法；集團副總裁統籌制定水資源管理戰略，規劃用水總目標，並分解至部門；安環部負責監督執行月度考核工作，通過正激勵和負激勵雙向驅動，促進用水目標的順利達成。

The Group has formulated the Indicator Comprehensive Evaluation Management System, which includes the water budget of 16.876 million tons and the water consumption per head of cattle of 110kg into the annual comprehensive ranking and evaluation method of indicators for the departments. A vice president of the Company coordinates and formulates water resource management strategies, plans overall water use goals, and decomposes them into departments. The Department of Safety and Environment is responsible for supervising the implementation of monthly assessment work, and promoting the smooth achievement of water use goals through two-way driving of positive and negative incentives.

現代牧業持續開展產業鏈水資源管理提升工作，鼓勵和指導供應商搭建系統化水資源管理方案，建立節水目標，實施與水管理目標一致的節水措施，同時現代牧業通過溝通交流、培訓共建等方式，積極引導供應商開展生活用水和生產用水節約項目並加大內、外部宣傳力度，將節水意識融入公司運營和員工日常生活，有效提升上游節水意識。

Modern Dairy continues to carry out the improvement of water resource management in the industrial chain, encourages and guides suppliers to build a systematic water resource management plan, establishes water-saving goals, and implements water-saving measures consistent with water management goals. At the same time, Modern Dairy actively guides suppliers to carry out domestic and production water conservation projects through communication, training and joint construction, and intensifies internal and external publicity efforts to integrate water conservation awareness into company operations and employees' daily lives, effectively improving upstream water conservation awareness.



– 水風險識別
Water Risk Identification

現代牧業持續關注運營地的水壓力風險，採用WRI水風險地圖評估模型和工具，參考中國水利部公佈的《2021年中國水資源公報》¹¹，中國《2021年中國環境狀況公報》¹²水資源稀缺程度及水質優劣，排查識別高水風險地點運營的牧場，規劃撤出或合理開發活動。

Modern Dairy continues to pay attention to the water stress risk of the place of operation, and uses the WRI water risk map assessment model and tools by reference to the scarcity of water resources and the quality of water shown in the 2021 China Water Resources Bulletin¹¹ and the 2021 China Environmental Status Bulletin¹² published by the Ministry of Water Resources of China to troubleshoot and identify farms operating in high water risk locations, and plan withdrawal or reasonable development activities.

牧場所在地區 Region where the farms are located	水質優劣分析 Water quality analysis	水資源稀缺程度 Scarcity of water resources
塞北大區 Sebei Region	劣 Inferior	較稀缺 Relatively scarce
東北大區 Northeast Region	劣 Inferior	較充足 Relatively abundant
察北大區 Chabei Region	劣 Inferior	較稀缺 Relatively scarce
華北大區 Northern China Region	劣 Inferior	較稀缺 Relatively scarce
華中大區 Central China Region	中 Medium	較充足 Relatively abundant
華東大區 Eastern China Region	優 Excellent	較充足 Relatively abundant
巴盟大區 Bameng Region	劣 Inferior	較稀缺 Relatively scarce
西北大區 Northwest Region	優 Excellent	稀缺 Scarce
內蒙大區 Inner Mongolia Region	中 Medium	較充足 Relatively abundant

¹¹ 2021年中國水資源公報 (mwr.gov.cn)
2021 China Water Resources Bulletin (mwr.gov.cn)

¹² 349e930e68794f3287888d8dbe9b3ced.pdf (www.gov.cn)

– 動物養殖過程用水管理

Water Management in Animal Breeding Process

目標：

Target:

公司計劃2022年單頭牛用水量較2021年降低25%，實際單頭牛用水量較2021年降低了27%。

The Company targets to reduce the water consumption per cow in 2022 by 25% compared with 2021, and the actual water consumption per cow decreased by 27% compared with 2021.

節水舉措：

Water-saving measures:

- 改變牛奶製冷工藝節約用水量：新增一台室外一體風冷式冷水機組和兩段式板式換熱器，先用溫度低於18℃的自來水，通過板換預冷段將牛奶進行降溫，與牛奶換熱後自來水回至水窖；然後用冷水機組打冷低於2℃的冰水在板換與牛奶換熱後回至冰水系統降溫，循環使用。

Change milk refrigeration process to save water: Add an outdoor integrated air-cooled chiller and two-stage plate heat exchanger. First use tap water with a temperature lower than 18℃, cool down the milk through the plate exchange pre-cooling section, then return the tap water to the water cellar after exchanging heat with the milk; then use the chiller to cool down the ice water below 2℃, and return it to the ice water system to cool down after the heat exchange between the plate exchange and the milk, which is recyclable.

- 精準噴淋減少用水量：牛舍安裝精準噴淋熱應激期間使用，當牛只在噴淋區域內檢測到有牛的時候噴淋頭電磁閥打開進行噴水，噴淋區域沒有牛只的情況下噴淋頭關閉減少用水量，平均節水率達到39%。精準噴淋已經應用於4個萬頭牧場，可省電10%，由於進入糞污管理系統的水量減少，節省糞污管理系統耗電量15%。

Precision spraying to reduce water consumption: The cowshed is installed with precision spray for use during heat stress. When cattle are detected in the spraying area, the solenoid valve of the sprinkler head will open to spray water; and when there are no cattle in the spraying area, the sprinkler head will be closed to reduce water consumption, with the average water-saving rate of 39%. Precision spraying has been applied to 4 large-scale farms, which can save 10% of electricity and save 15% of the power consumption of the manure management system due to the reduction of water entering the manure management system.

- 回收利用節約用水：對奶廳擠奶機的清洗水進行回收處理，用於沖洗待擠區。

Recycle to save water: The cleaning water of the milking machine in the milking parlor is recovered and used for flushing the waiting area.



– 飼料種植過程用水管理

Water Management in Feed Growing Process

目標：

Target:

2022年計劃飼草種植灌溉用水比同地區其他農田用水節約10%，實際節約13%。

It was planned that in 2022, the irrigation water for forage planting would be saved by 10% compared with other farmland in the same area, and the actual saving rate was 13%.

節水舉措：

Water-saving measures:

- 灌溉模式節約用水量：採用指針式噴灌模擬自然降雨，提高水肥利用率，較傳統灌溉模式節水約40%；引入淺埋式滴灌技術，實際精準水肥一體，水分直接供給植物根部，減少水分和養分的浪費，降低地表蒸騰，較漫灌節水約55%。

Irrigation modes to save water: Use pointer sprinkler irrigation to simulate natural rainfall to improve water and fertilizer utilization efficiency, saving approximately 40% of water compared with traditional irrigation mode. The introduction of shallow-buried drip irrigation technology integrates water and fertilizer with actual precision, and water is directly supplied to plant roots, reducing water and nutrient waste, reducing surface transpiration, and saving approximately 55% of water compared with flood irrigation.

- 灌溉節點控制節約用水量：結合氣象信息和飼草料的生長發育特點，在適合的時間進行灌溉，適時進行階段性停水煉苗，避免灌溉過程中水分浪費，達到節水效果。

Irrigate nodes to control water conservation: Irrigate at the appropriate time according to the meteorological information and the growth and development characteristics of the forage material, and carry out periodic water suspension to harden the seedlings in a timely manner to avoid water waste during irrigation and achieve water-saving effects.

- 品種及技術改良節約用水量：選育適宜當地的耐旱節水優良飼草品種，改良種植結構和種植制度，推廣設施農業，推廣工程設施標準化，達到節水效果。

Variety and technology improvement to save water consumption: Select and breed excellent forage grass varieties suitable for local drought tolerance and water saving, improve planting structure and planting system, promote facility agriculture and the standardization of engineering facilities to achieve water saving effects.



03 技术攻关 —— 智能滴灌实现高效节水



• 实现精准水肥一体化，水直接被滴灌到植物的根区，减少水分和养分的浪费，被植物更好的吸收利用，较渠灌节水 55%



滴灌原理及應用展示圖

Principle and application of drip irrigation

表：2022年現代牧業資源使用表

Table: Resource Usage Table of Modern Dairy of 2022

指標 Indicators	單位 Unit	2022年 2022	2021年 2021
外購用電總量 Total amount of outsourced electricity	萬千瓦時 ten thousand kWh	40,313.47	30,491.84
燃煤 ¹³ Fuel coal ¹³	噸 tons	141.00	1,500.00
天然氣 ¹⁴ Natural gas ¹⁴	萬立方米 ten thousand cubic meters	68.08	40.88
柴油 ¹⁵ Diesel ¹⁵	萬升 ten thousand liters	1,089.14	613.78
汽油 ¹⁶ Gasoline ¹⁶	升 liters	14,574.90	170,100.00
沼氣消耗量 Biogas consumption	萬立方米 ten thousand cubic meters	12,035.26	12,867.13
綜合能源消費總量 Total energy consumption	噸標煤 tons of standard coal	159,645.20	138,900.00
百萬營收綜合能源消費總量 Total energy consumption per million revenue	噸標煤/百萬元 tons of standard coal/ million	12.98	21.08
用水總量 ¹⁷ Total water consumption ¹⁷	萬噸 ten thousand tons	1,579.27	977.43
百萬營收用水量 Water consumption per million revenue	萬噸/百萬元 ten thousand tons/ million	0.13	0.15



- **包裝管理**
Packaging Management

公司使用符合《中華人民共和國汽車行業標準 – 鮮奶運輸車輛(QC/T 23-2014)》及環保要求的奶罐車進行運送，因此在原奶運輸中不使用任何其他包裝材料或產生任何包裝廢棄物。在選用奶罐車時對原奶罐體設有嚴格的衛生安全標準，要求裝運原奶的罐體使用環保、可持續、循環使用的保溫材料，具有良好的化學穩定性，不吸潮，對罐體無腐蝕、無毒，並能滿足工作溫度的要求。

The Company uses milk tankers that comply with the Automobile Industry Standards of the People's Republic of China – Fresh Milk Transport Vehicles (QC/T 23-2014) and environmental protection requirements for transportation, so no other packaging materials are used and no packaging waste is generated in the transportation of raw milk. We have strict hygiene and safety standards for raw milk tanks. We require that the tanks for shipping raw milk use environmentally friendly, sustainable and recycled thermal insulation materials, which have good chemical stability, do not absorb moisture, are non-corrosive and non-toxic to the tank and can meet the requirements of working temperature.

- 13 燃煤：2022年通遼牧場通過改生物質顆粒鍋爐、阜民丰牧場使用空氣熱泵供暖，故燃煤消耗量減少
Fuel coal: In 2022, Tongliao Farm transformed the biomass pellet boilers and Fuminfeng Farm used air heat pumps for heating, so the consumption of fuel coal was reduced
- 14 天然氣：2022年自產氣量降低，通過外購天然氣進行生活區供暖和發酵池加熱工作，故天然氣使用量增加
Natural gas: In 2022, with a decrease in self-produced gas, natural gas was purchased for heating of living areas and fermentation tanks, so the consumption of natural gas increased
- 15 柴油：2022年公司將汽油設備替換為柴油設備，故柴油消耗量增加
Diesel: In 2022, the Company replaced gasoline equipment with diesel equipment, so diesel consumption increased
- 16 汽油：2022年公司將汽油設備替換為柴油設備，故汽油消耗量減少
Gasoline: In 2022, the Company replaced gasoline equipment with diesel equipment, so gasoline consumption decreased
- 17 用水量：2022年公司新增牧場，故用水量增加
Total water consumption: In 2022, the Company acquired new farms, so the water consumption increased



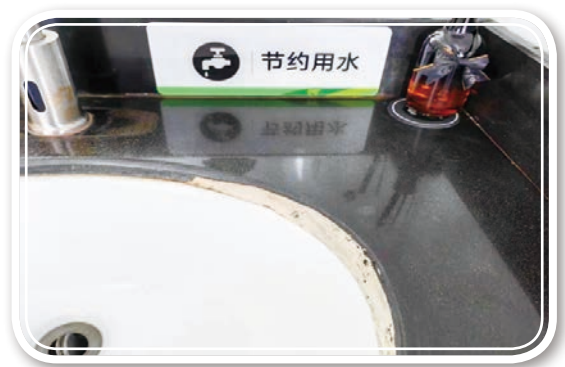
- 綠色行動
Green Action

現代牧業開展綠色生活創建行動，增強全員節約意識，倡導綠色健康的工作和生活方式。集團利用世界地球日、「六五環境日」等組織開展各類環保活動：

Modern Dairy launched the “Creating Green Life” activities to enhance the awareness of conservation among all employees and advocate a green and healthy work and life style. The Group organized and carried out various environmental protection activities on the themes of World Earth Day and Environment Day:

綠色辦公宣傳：在人員用水用電區域均張貼「節水、節電、資源節約」提示標識、場區懸掛宣傳條幅形式提醒、播種綠色運營資源節約意識的種子。

Advocating green office: Reminder signs of “Water saving, electricity-saving, and resource-saving” were posted in areas where the people use water and electricity, and reminders in the form of publicity banners were hung on the site, sowing the seeds of awareness of green operation and resource conservation.



環保公益活動：組織員工開展「垃圾清理」行動、「低碳出行、徒步行走」活動。

Environmental protection and charitable activities: We organized employees to carry out garbage cleaning, low-carbon travel, and hiking activities.



環保宣傳活動：在「六五環境日」當天積極組織開展宣傳活動，在安環專欄發布《六五環境日 - 共建清潔美麗世界》，對外傳播生態文明理念、講好中國生態環境保護故事，並且同步開展「六五環境日」條幅、視頻、政企聯合環保宣傳活動。

Environmental protection campaign: We actively organized publicity activities on Environment Day, and published an article entitled "The Environment Day-Building a Clean and Beautiful World" in the safety and environmental protection column to spread the concept of ecological civilization to the outside world and tell the story of China's ecological and environmental protection. Banners, videos and government-enterprise joint environmental protection publicity activities on Environment Day were also carried out.



02



普惠動物福利 |
Promoting Animals' Welfare

2. 普惠動物福利 Promoting Animals' Welfare

本公司高度認同奶牛福利對保障奶類企業健康發展、促進奶源食品安全的重要意義，將保障奶牛福利作為公司核心價值觀，納入《中國現代牧業道德準則》，公開表明普惠動物福利事業的決心。從動物本身出發，全面關注動物生理和心理需求，以科學的方式善待動物、減少動物痛苦和應激反應、提供動物適宜的生長環境和營養、提高動物生存質量和健康水平為理念，落實規定奶牛在養殖、運輸、淘汰各環節的動物福利要求和實踐。

The Company highly recognizes the importance of the welfare of dairy cows to ensure the healthy development of dairy companies and promote the safety of milk source food. The Company regards the protection of dairy cow welfare as its core value and incorporates it into the Code of Ethics of China Modern Dairy, publicly expressing its determination to promote animals' welfare. Starting from the animals themselves, we pay full attention to the physiological and psychological needs of animals by treating animals scientifically, reducing animals' pain and stress response, providing animals with suitable growth environment and nutrition and improving animals' quality of life and health, and implement the animal welfare requirements and practices in the stages of breeding, transportation and elimination of dairy cows.

現代牧業始終相信「好牛自然產好奶」，堅持「品種好、吃得好、住得好、身體好、心情好」的「五好奶牛」原則，持續致力於福利養殖理念與技術的研究並向全行業推廣，以實際行動獲得外界各方認可。2022年，現代牧業取得《農場動物福利要求奶牛》認證，成為中國第一批獲得《農場動物福利產品》證書的乳企。

The dairy cows owned by Modern Dairy are basically self-propagating, and a small number of imported dairy cows come from areas without deforestation. Modern Dairy always believes that “good cows naturally produce good milk” by adhering to the “five-good cows” principle of “good breed, good food, good housing, good health and good mood”. Modern Dairy continues to devote itself to the research of welfare breeding concepts and technologies and promotes them to the whole industry, winning recognition from all parties with its practical actions. In 2022, Modern Dairy obtained the “Farm Animal Welfare Requirements for Cows” certification, becoming the first batch of dairy companies in China to obtain the “Farm Animal Welfare Products” certificate.



01

使牛隻免於飢渴乾渴，隨時獲取水與飲食來保持牛隻健康與活力。

Keep cows healthy and active by freeing cows from hunger and thirst and allowing cows to have ready access to water and food.

02

避免牛隻嚴密禁閉，提供安全、舒適的環境，保證牛隻活動場所地面防滑，提供足移的空間、適當的設施以及同類陪伴，給予牛隻只表達正常行為的自由，避免牛隻不適，保證牛隻生理及心理的健康狀態。

Avoid strict confinement of cattle, provide a safe and comfortable environment and ensure that the ground of cattle activities is non-slip. Provide enough space, appropriate facilities and companionship to give cattle the freedom to express normal behaviours, avoid cattle discomfort, and ensure the physical and psychological health of cattle.

03

禁止妊娠和分娩的板條箱、籠子、拴系物，保證牛隻活動自如。

Pregnancy and birthing crates, cages and tethers are prohibited and cattle are allowed to move freely.

04

為牛隻提供豐富的活動場所及環境，保持臥床乾燥，設置合理的白天光照及夜間黑暗程度，提供豐富多樣的休憩環境。

Provide a variety of activity places and environments for cattle, keep their beds dry, set the appropriate daytime light and nighttime darkness, and provide diverse rest environments.

05

根據運輸時間長短，落實運輸前的牛隻預防用藥措施。避免嚴密緊閉和長途運輸，保證勻速行駛防止牛隻滑倒受傷。保證運輸中的牛隻飲用水供給，充分考慮天氣及運輸途距因素，靈活調整供給量和飼餵頻次。

Implement preventive medication measures for cattle before transportation according to the length of transportation. Avoid tight sealing and long-distance transportation and ensure uniform speed to prevent cattle from slipping and being injured. Ensure the supply of drinking water for the cattle in transit, and flexibly adjust the supply and feeding frequency by fully considering the factors of weather and transportation distance.

06

通過預防或快速診斷與治療，使牛隻免於疼痛、傷害和疾病。

Keep cattle free from pain, injury and disease through prevention or rapid diagnosis and treatment.

07

通過確保避免精神痛苦的條件和治療使牛隻免於恐懼和痛苦。

Free cattle from fear and pain by ensuring conditions and treatments without mental distress.

08

保障牛隻自由生長，不向動物使用激素等促生長物質。

Ensure the free growth of cattle and do not use growth-promoting substances such as hormones on animals.

09

定期對動物生產業務進行內部審查，保證牛隻精心繁育照看。

Regular internal reviews of animal production operations are carried out to ensure that cattle are carefully bred and cared for.



2.1 環境及行為福利

Environmental and Behavioural Welfare

現代牧業着力解決動物生活環境中存在的各項問題，實現各牧場牛隻舒適度標準化，降低牛隻因環境不舒適造成的能量損失。

Modern Dairy focuses on solving various problems in the living environment of animals, realizes the standardization of the comfort level of cattle in each farm, and reduces the energy loss of cattle caused by the uncomfortable environment.

- **打造舒適牛舍**
Creating Comfortable Cowsheds

現代牧業各牧場遵循《奶牛舒適度管理制度》，從牛床設計、舍內小環境包含溫度、濕度、通風、光照等要素着手，科學設計牛舍，提升日常管理，營造舒適的牛舍小氣候，保證奶牛良好的休息環境，在提升動物福利的同時，有效提高奶牛產量和質量。

All farms of Modern Dairy follow the Dairy Cow Comfort Management System, starting from the cow bed design, the small environment in the house including temperature, humidity, ventilation, light and other factors, scientifically design the cowsheds, improve daily management, and create comfortable cowsheds, so as to ensure a good rest environment for dairy cows, and effectively improve the output and quality of dairy cows while improving animal welfare.

臥床舒適 Comfortable beds	<ul style="list-style-type: none">- 依據牧場資源結合環保要求，墊料選擇沙子、鋸末、稻殼等鬆軟、乾燥，對生態環境和奶牛均無危害的材料，並嚴格把控外購墊料的質量；定期維護臥床，保證日常平整和乾燥清潔；檢查墊料充足度、厚度、磨損度符合標準，及時補充或更換墊料，同時避免浪費。 <p>Under the requirements of environmental protection and relying on the resources of each farm, sand, sawdust, rice husk and other soft and dry materials are selected as bedding materials, which are not harmful to the ecological environment and dairy cows, and the quality of purchased bedding materials is also strictly controlled. Maintain the bed regularly to ensure daily flatness, dryness and cleanliness. Check whether the adequacy, thickness and wear of the bedding materials meet the standards, replenish or change the bedding materials in time, and avoid waste.</p>
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<p>牛舍清潔 Cowshed cleaning</p>	<ul style="list-style-type: none"> - 及時清理糞污，禁止泌乳牛舍在有牛的狀態下進行機械清理作業，保障人員和奶牛安全。 Clean up manure in a timely manner, and prohibit mechanical cleaning operations in lactating cowsheds when there are cows, so as to ensure the safety of personnel and cows.
<p>通風良好 Good ventilation</p>	<ul style="list-style-type: none"> - 控制通風風速，保持牛舍的溫度在不同季節的恆溫標準範圍內；日常加強氨氣檢測，保證通風，控制牛舍內的氨氣濃度在標準以內。 Control the ventilation speed to keep the temperature of the cowshed within the constant temperature standard range in different seasons. Frequently strengthen ammonia detection and ensure ventilation to control the ammonia concentration in the barn within the standard. - 提高牛舍體感舒適，使用低駕駛室裝載機進行清糞，頸夾風機高度由原來3米高度降低到2.5米。 To improve the physical comfort of the cowsheds, use loaders with a low cab to clear manure, and reduce the height of the neck fan from 3 meters to 2.5 meters.
<p>光照補足 Complementary lighting</p>	<ul style="list-style-type: none"> - 加強多處地點的實際光照強度檢測，合理延長光照時間，科學設計照明布局，保障奶牛生長發育和泌乳所需光照。 Strengthen the detection of actual light intensity in multiple locations, reasonably extend the light time, and scientifically design the lighting layout to ensure the light required for the growth and lactation of dairy cows.



臥床鋪墊
Beddings



- 優化活動場所
Optimizing the Playgrounds

現代牧業為奶牛提供自由舒適的活動場，鼓勵奶牛積極的自然行為，保證奶牛獲得適量的運動，促進牛的反芻和消化吸收；從奶牛的生活細節出發，建設完善的生活設施，防止肢蹄病的發生，形成奶牛健康的生活習慣。

Modern Dairy provides dairy cows with free and comfortable playgrounds and encourages positive natural behaviors of dairy cows, so as to ensure that dairy cows get proper exercise and promote rumination, digestion and absorption of cows. Starting from the life details of dairy cows, it also builds complete living facilities to prevent the occurrence of limb and foot diseases and form healthy living habits for dairy cows.

<p>運動場管理 Playground management</p>	<ul style="list-style-type: none"> - 保持運動場地地面乾燥舒軟，雨後及時做好排水工作，泥濘積水情況下避免奶牛入場，降低牛肢蹄病、隱形乳房炎等動物疾病的發病率；及時處理異物糞污，避免對奶牛造成傷害。 Keep the ground of the sports field dry and soft with timely drainage after rain, and avoid cows entering the field in the case of muddy water, so as to reduce the incidence of animal diseases such as bovine hoof disease and invisible mastitis. Dispose of garbage and manure in time to avoid harm to dairy cows.
<p>生活設施管理 Living facilities management</p>	<ul style="list-style-type: none"> - 保障飲水，保證24小時水量充足和水溫適宜，定期評估水質，保證飲水乾淨無異；合理設計水槽寬度，保證每頭牛飲水不受障礙；科學噴淋，有效持續降低牛體體溫，控制濕度。 Guarantee drinking water, ensure sufficient water volume and suitable water temperature throughout the day, and regularly evaluate water quality to ensure that drinking water is clean and without abnormalities. Reasonably design the width of the water tank to ensure that the drinking water of each cow is not hindered. Scientific spraying is used to effectively and continuously lower the body temperature of cattle and control humidity.



- 關注犢牛福利
Calves' Welfare

現代牧業關注牧場牛群的後備力量，不斷提升犢牛飼養管理福利，制定《犢牛管理制度》，保證犢牛身心健康、居住環境舒適和個體安全。

Modern Dairy pays attention to the reserve force of cattle. It continuously improves the benefits of calf feeding and management, and has formulated the Calf Management System to ensure the physical and mental health of calves, a comfortable living environment and personal safety.

<p>犢牛舍管理 Calf house management</p>	<ul style="list-style-type: none"> 為產房新生犢牛設置犢牛島，保證一牛一清；依據犢牛換季操作管理手冊，規範待產欄、暫存欄、斷奶時期的墊料選取、鋪設、清理等工作，為犢牛各生長階段提供舒適安全的休息場所。 <p>Set up a calf island for newborn calves in the delivery room to ensure that every calf is cleaned up. According to the operation and management manual for changing seasons of calves, standardize the selection, laying, and cleaning of bedding materials in the waiting pens, temporary storage pens and weaning periods to provide comfortable and safe rest places for calves in each growth stage.</p>
<p>消毒管理 Sterilization management</p>	<ul style="list-style-type: none"> 犢牛免疫力低，牧場在新生犢牛暫存欄、室內牛舍等生活區域和需要循環使用的設備進行全方位消毒，避免細菌滋生，助力犢牛健康成長；使用石灰粉對收集的胎衣或死胎進行消毒並做無害化處理，同時對拾取位置進行消毒，避免污染。 <p>Due to the low immunity of calves, the farm conducts all-round disinfection in living areas such as temporary storage pens for newborn calves, indoor cowsheds, and equipment that needs to be recycled to avoid bacterial growth and help calves grow healthily. The collected afterbirth or stillbirth is sterilized and harmless treated with lime powder, and the pick-up location is sterilized, so as to avoid pollution.</p>



<p>舒適環境 Comfortable environment</p>	<ul style="list-style-type: none"> - 加強保暖措施，為犢牛提供禦寒馬甲，室內使用保溫燈或暖風機，通過加築轉運車頂棚或者轉運時覆蓋毛巾，保障室外的保暖飼養；通過調整室外犢牛島擺放朝向和使用保溫塑料薄膜包圍犢牛欄，幫助犢牛躲避寒風及雨雪；做好分群管理，根據生長指標和體格大小調群，提供每頭奶牛寬闊舒適的生活空間，有效控制飼養密度。 <p>Strengthen heat preservation measures by providing vests for calves and using heat preservation lamps or heaters indoors, and ensure outdoor warm feeding by building a transfer vehicle roof or covering with towels during transfer. Help calves avoid cold wind, rain and snow by adjusting the orientation of the outdoor calf island and surrounding the calf pen with thermal insulation plastic film. Carry out group management and make adjustments according to growth indicators and body size to provide each cow with a wide and comfortable living space and effectively control the stocking density.</p>
<p>避免應激反應 Avoid stress response</p>	<ul style="list-style-type: none"> - 為了有效避免犢牛斷奶過渡應激，執行逐步斷奶，餵奶量在一定時間段逐步降低，確保犢牛可以逐步提高固體飼料的攝入量。斷奶後犢牛原舍繼續飼養一週，保證在斷奶後能攝入足夠的固體飼料，確保日增重持續穩定在不低於0.9千克／天。斷奶轉群後實行小欄飼養，10-12頭／欄，合理設計過渡期配方，確保足夠的物理刺激、瘤胃動力、過瘤胃速度、足夠維持生長的澱粉、保證適口性。 <p>To effectively avoid the transitional stress of calf weaning, weaning is carried out gradually, and the amount of milk fed is gradually reduced in a certain period of time to ensure that calves can gradually increase the intake of solid feed. After weaning, the calves will continue to be raised in the original house for one week to ensure that they can consume enough solid feed after weaning and the daily gain is continuously stable at no less than 0.9kg/day. After weaning and transfer to groups, small-pen feeding (10-12 heads/pen) should be implemented, and the formula for the transition period should be reasonably designed to ensure sufficient physical stimulation, rumen power, rumen passing speed, enough starch to maintain growth and palatability.</p>



案例
Case study

冷熱應激培訓
Training on heat and cold stress

- 為保證公司全年總奶量達成的目標，規範各牧場防寒保暖及防暑降溫工作，降低冷、熱應激對牛隻的影響，確保人員安全、設備設施正常運行，集團技術創新部制定了《防寒保暖工作指導方案》、《熱應激工作管理方案》、《熱應激操作標準SOP》，並召開冷、熱應激啓動會議及總結會議，保障各種方案的及時、準確落地，讓冷、熱應激對牛隻的影響降低到最小。2022年，成母牛年單產大於13噸的牧場達到11座。

To ensure the achievement of the Company's annual total milk volume target, standardize the cold and heat preservation and heatstroke prevention and cooling work of each farm, reduce the impact of cold and heat stress on cattle and ensure the safety of personnel and the normal operation of equipment and facilities, the Group's Technology Innovation Department formulated the Guidance Plan for Cold and Warm Protection, the Management Plan for Heat Stress and the Heat Stress Operation Standard SOP, and also held cold and heat stress start-up meetings and summary meetings to ensure the timely and accurate implementation of various plans, so as to minimize the impact of cold and heat stress on cattle. In 2022, there were 11 farms with an annual yield of adult cows of more than 13 tons.



2.2 生理及心理福利

Physiological and Psychological Well-being

現代牧業從科學角度出發，充分發揮優質奶牛高生產性能的遺傳潛質，建立優質核心種群。同時從開發奶牛的日常營養方案、精準投餵技術、培養關愛互動等方面發力，有效提升動物生活品質。

From a scientific point of view, Modern Dairy gives full play to the genetic potential of high-quality dairy cows with high production performance and establishes a high-quality core population. It also works hard in developing daily nutrition programs for dairy cows, precise feeding techniques and cultivating caring interactions, so as to effectively improve the quality of life of animals.

- **科學飼育方法**
Scientific Breeding Methods

現代牧業積極踐行科學飼育行動，通過規範奶牛飼育管理、改良育種技術、操作培訓，提升奶牛存活率，優化種群，提高整體健康水平。

Modern Dairy actively implements scientific breeding actions, and improves the survival rate of dairy cows, optimizes the population, and boosts the overall health level through standardized dairy cow feeding management, thus improving breeding technology and operational training.

<p>規範飼餵 Standardized feeding</p>	<ul style="list-style-type: none">- 規範斷奶前犢牛飼餵操作，嚴格巴氏滅菌乳的採樣存放要求，由專職部門負責協助檢驗細菌菌落指標，明確代乳粉的調配使用，同時建立更換代乳粉的過渡方案，全面規範從餵奶桶選擇到常乳巴殺機的清洗程序，避免因飼餵操作不規範影響犢牛的正常發育和建康成長。 Standardize the calf feeding operation before weaning, strictly control the sampling and storage requirements of pasteurized milk, and a specialized department is set to be responsible for assisting in the inspection of bacterial colony indicators and clarifying the deployment and use of milk replacer powder. Meanwhile, establish a transition plan for replacing milk replacers, and comprehensively standardize the cleaning procedures from the selection of feeding buckets to the cleaning of milk powder, so as to avoid affecting the normal development and healthy growth of calves due to irregular feeding operations.
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精心繁育
Careful breeding

- 在全球甄選品種優良的「荷蘭貴族」荷斯坦奶牛、「英國皇室專供」的娟珊奶牛以及由「DNA基因技術篩選」的A2基因型奶牛。
We select high-quality “Dutch Noble” Holstein cows, Jersey cows “exclusively for the British royal family” and A2 genotype cows screened by “DNA gene technology” from all over the world.
- 制定個體選配方案，通過基因檢測選擇綜合指數高、健康長壽，奶量提升、乳汁品質良好的優質凍精和胚胎開展自產胚胎移植項目，培育「健康、高產、高效、高質量」的核心奶牛群，最大限度發揮奶牛的遺傳潛力。2022年共移植胚胎1,663枚，共獲得胚胎移植牛368頭，其中公牛20頭，母牛348頭。商河牧場生產體外胚胎560枚。
Formulate individual matching plans, select high-quality frozen semen and embryos with high comprehensive index, healthy longevity, increased milk volume and good milk quality through genetic testing to carry out self-produced embryo transfer projects, aiming to cultivate a “healthy, high-yield, high-efficiency, high-quality” core dairy herd and maximize the genetic potential of dairy cows. In 2022, a total of 1,663 embryos were transferred, and a total of 368 embryo-transfer cattle were obtained, including 20 bulls and 348 cows. Shanghe Farm produced 560 in vitro embryos.

專業培訓
Professional training

- 牧場管理過程遵從奶牛的生理習性，為奶牛提供自然放鬆的生活環境。在與奶牛接觸環節，員工嚴格遵循標準操作並接受專業培訓，如針對奶廳人員開展擠奶操作流程、乳房炎的揭發、其它異常乳的揭發等培訓課程，要求操作輕柔，不得有趕牛趕立、大聲吆喝或噪音等行為，通過奶牛福利相關培訓實現最小化應激飼養。
The management process of the farm should follow the physiological habits of dairy cows and provide a natural and relaxing living environment for dairy cows. Regarding contact with dairy cows, employees strictly follow standard operations and receive professional training, such as training courses about milking operation procedures, detection of mastitis and detection of other abnormal nipples for milking parlor personnel. We require gentle operation with no behaviors such as driving cows to stand up, shouting loudly or making noise, and minimize stress feeding through dairy cow welfare-related training.



- 嚴格執行《獸醫部門生產操作管理制度》的相關要求，禁止生產過程中對奶牛有任何踢打行為或者惡意傷害牛隻行為，對於違反愛護動物的行為，按照相關制度條例進行處罰。此外，我們提升員工對動物福利的認識，強化員工以人道主義方式對待奶牛的意識，逐步開展動物互動計劃，提升動物福利水平。

We strictly implement the relevant requirements of the Production and Operation Management System of the Veterinary Department and prohibit any behaviour of kicking or maliciously hurting cows during the production process. For behaviors that violate the care of animals, penalties will be imposed in accordance with relevant systems and regulations. In addition, we enhance employees' awareness of animal welfare and strengthen employees' awareness of treating dairy cows in a humanitarian manner, gradually carrying out animal interaction programs to improve animal welfare.



榮獲全國「金種子」犏牛評選最強繁殖力犏牛「冠軍」

The Champion of the Most Reproductive Calf in the National "Golden Seed" Calf Selection



蚌埠五河、合肥、賽罕、通遼牧場奶牛榮獲最「牛」明星評選活動性能卓越獎

Dairy cows from Bengbu Wuhe Farm, Hefei Farm, Saihan Farm and Tongliao Farm won the Performance Excellence Awards in the Best "Cow" Star Selection activity

- **飼料營養配方**
Nutritional Formulations of Feeds

現代牧業專注於奶牛營養解決方案，平衡營養與能量的比例，以提高奶牛的食慾和進食量，滿足奶牛各生長階段的營養需求。此外，我們開發運營解決方案和工具，使用最新並基於CNCPS6.1營養體系研究開發的AMTS奶牛配方管理軟件，得到更全面的營養配方方案。

Modern Dairy focuses on dairy cow nutrition solutions, balancing the ratio of nutrition and energy, so as to increase the appetite and food intake of dairy cows and meet the nutritional needs of dairy cows at each growth stage. In addition, we develop operational solutions and tools, and use the latest AMTS dairy cow formula management software researched and developed based on CNCPS6.1 nutritional system to obtain a more comprehensive nutritional formula plan.

營養均衡
Balanced nutrition

- 日糧配方中含有奶牛集體所需的全部營養物質，根據不同階段奶牛的生理特性及乾物質採食量，通過不同原料之前的營養物質組合效應，分配各種原料的使用量，以滿足奶牛高效生產的需要。
The ration formula contains all the nutrients the cow collectively needs. According to the physiological characteristics and dry matter intake of dairy cows at different stages and through the combination effect of nutrients before different raw materials, the usage of various raw materials is allocated to meet the needs of the efficient production of dairy cows.
- 飼料配方保證營養全面、均衡，滿足不同階段牛隻的營養需求，平衡各營養成分配比，精粗飼料搭配合理。根據不同地區、品種、季節、飼養條件和原料供應、質量差異等因素靈活調整。
The feed formula ensures comprehensive and balanced nutrition to meet the nutritional needs of cattle at different stages, balances the distribution of various nutrients, and has a reasonable mix of concentrate and roughage. It can be flexibly adjusted according to factors such as different regions, varieties, seasons, feeding conditions, raw material supply, and quality differences.



<p>定制化配方 Customized formula</p>	<ul style="list-style-type: none"> - 營養師現場評估原料質量，根據額牛群的基本狀況，不同原料按照不同配比，設計牛群定制化配方。 Nutritionists evaluate the quality of raw materials on site, and design customized formulas for cattle according to the basic conditions of the cattle and different raw materials in different proportions. - 牧場嚴格按照營養部下發的配方執行，做好牛群配料表，按照配料表製作TMR(全混合日糧)。 The farm strictly implements the formula issued by the Nutrition Department, prepares the ingredient list for the cattle, and then prepares TMR (Total Mixed Ration) according to the ingredient list.
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- **精準飼料投放**
Precise Feed Delivery

各牧場嚴格執行上料流程，控制上料比例誤差，確保混合均勻、無結塊、肉眼可見異物、無霉變，滿足奶牛感官要求。投放飼料工作滿足準確性和及時性，保證各類牛群按照飼養處下發的送料時間，準時送料，明確規定泌乳牛和非泌乳牛的送料時間範圍波動分別在20分鐘和30分鐘之內，同時規範撒料均勻度和長度，合理設計採食道和撒料車輛，整合資源，提高飼餵效率，保留飼料營養，提升奶牛採食體驗。

The farms strictly implement the feeding process, control the feeding ratio error, and ensure uniform mixing, no agglomeration, no visible foreign matter and no mildew to satisfy the sensory experience of dairy cows. The farms require the accuracy and timeliness of feeding work to ensure that all kinds of cattle are fed on time according to the feeding time issued by the feeding department, and stipulate that the feeding time range of lactating cows and non-lactating cows fluctuates within 20 minutes and 30 minutes respectively. We also standardize the uniformity and length of the feeding, and rationally design the feeding ducts and feeding vehicles to integrate resources, improve feeding efficiency, preserve feed nutrition and improve the feeding experience of dairy cows.



2.3 健康及安全福利

Health and Safety Welfare

本公司嚴格遵循《中華人民共和國動物防疫法》、《中華人民共和國動物檢疫管理辦法》相關規定，不斷完善內部《防疫管理制度》等相關制度，在實現奶牛養殖集約化、規模化的同時，秉承「以防為主，防重於治」的防疫理念，促使奶牛防疫工作日趨標準化、體系化。

The Company strictly abides by the relevant regulations of the Animal Epidemic Prevention Law of the People's Republic of China and the Measures for the Administration of Animal Quarantine of the People's Republic of China, and continuously improves the Management System on Epidemic Prevention and other related internal systems. While realizing the intensive and large-scale development of the dairy farming industry, we adhere to the epidemic prevention concept of "prevention first, prevention is more important than cure", so as to promote the standardization and systematization of dairy cattle epidemic prevention.

- **奶牛安全防疫**
Dairy Cow Safety and Epidemic Prevention

現代牧業完善防疫管控體系，加強防疫力量，升級技術水平，避免奶牛疫情風險。我們秉承「以防為主，防重於治」的防疫理念，將奶牛的防疫工作標準化、體系化，有效降低疫病風險，提高奶牛健康水平。報告期內，本公司淘汰牛檢疫率達到100%，奶牛口蹄疫接種覆蓋率達到100%，牛隻蹄病發病率下0.96%，乳房炎發病率1.69%。

Modern Dairy has perfected the epidemic prevention and control system, strengthened the epidemic prevention force and upgraded the technical level to avoid the risk of the dairy cow epidemic. Adhering to the epidemic prevention concept of "prevention first, prevention is more important than cure", we standardize and systematize the epidemic prevention work of dairy cows to effectively reduce the risk of diseases and improve the health of dairy cows. During the reporting period, the quarantine rate of culled cattle reached 100%, the coverage rate of foot-and-mouth disease vaccination of dairy cows was 100%, the incidence of hoof disease of cattle amounted to 0.96%, and the incidence of mastitis was 1.69%.

- **制定防疫計劃**：要求所有牧場結合所在地區情況，每年定期針對國家規定的人畜共患病、口蹄疫、牛流行熱等其他流行性疾病制定免疫計劃；

Developing epidemic prevention plans: All farms are required to formulate immunization plans for zoonotic diseases, foot-and-mouth disease bovine epidemic diseases and other epidemic diseases prescribed by the government on a regular basis every year according to the conditions of their regions;



- **全面疫苗接種**：每月對滿4月齡初免、滿5齡加強免疫，每年3次對6月齡以上牛群全群免疫(免疫時間應避開6/7/8月份熱應激)；
Full vaccination: Monthly booster immunization for 4-month-old cows and 5-year-old cattle, and 3 times a year for whole herds of over 6 months of age (avoid immunizations in June, July and August when heat stress occurs);
- **開展日常檢查**：各牧場配置獸醫對奶牛進行日常檢查看護，通過巡欄、新產牛護理、乳房炎治療、疾病治療等多項常規檢查，嚴格監控跛行率、乳腺炎發病率並控制發病率在10%以下，保證奶牛健康；
Daily health check: Assign veterinarians to conduct daily inspection and care of dairy cows in each farm, and conduct routine inspections such as patrolling, care of newly born cows, mastitis treatment and disease treatment. The lameness rate and the incidence of mastitis are strictly monitored to be below 10%, so as to ensure the health of dairy cows;
- **病害動物處理**：合規合法處理無飼養價值奶牛和病死牛，嚴格防控疫病傳播。內部制定《病害動物和病害動物產品生物安全處理規程》，明確要求掩埋管理、焚毀管理、消毒方法；
Diseased animals treatment: Dairy cows with no breeding value and dead cows should be handled in compliance with laws and regulations, and the spread of epidemic diseases should be strictly prevented. We have internally formulated the Regulations for the Biosafety Handling of Diseased Animals and Diseased Animal Products, which require landfill management, incineration management, and disinfection methods;
- **突發應急管理**：制定公司內部奶牛重大疫情應急預案制度，應對突發疫情建立健全管理機制，明確責任和處置流程，有效控制風險擴大範圍，減少經濟損失，維護公共衛生安全。
Emergency management: We have formulated the internal emergency plans and systems for major dairy cow epidemics to establish a sound management mechanism in response to sudden epidemics, clarify responsibilities and disposal procedures, effectively control the expansion of risks, reduce economic losses and maintain public health and safety.

- **抗生素使用管控**
Control of Antibiotic Use

本公司嚴格規範抗生素的使用用途，建立《疾病診療管理制度》，抗生素¹⁸僅作為治療藥物，對疾病牛隻進行治療。我們致力於減少抗生素使用量，明確抗生素使用條件，嚴格監督獸醫用藥情況，並對抗生素使用數據進行記錄與跟蹤。

The Company strictly regulates the use of antibiotics and establishes the Management System on Disease Diagnosis and Treatment. Antibiotics¹⁸ are only used as therapeutic drugs, to treat sick cattle. We are committed to reducing the use of antibiotics, clarifying the conditions for antibiotic use, strictly supervising veterinary medication, and recording and tracking antibiotic use data.

在發生用抗生素情況後，對牛隻進行單獨管理，嚴格進行過抗採樣檢測，確保牛隻痊愈且體內無抗生素含量。公司持續開展無抗藥品的研究與測試，致力於進一步減少抗生素藥物使用。同時，我們積極採取各項防疫措施，加強疫苗接種、健康監測，按照檢測要求嚴格進行無抗檢測及牛隻管理，並進一步提升飼育技術，通過改善飲食、增加益生菌含量、降低飼養密度等方式全面提升牛隻免疫力，有效降低牛隻疾病發病率，從而減少對抗生素的潛在需求。

After the use of antibiotics, cattle are managed individually and strict anti-sampling tests are carried out to ensure that the cattle are cured and have no antibiotic content in the body. The Company keeps carrying out research and testing of antibiotic-free drugs, striving to further reduce the use of antibiotics. At the same time, we actively take various anti-epidemic measures such as strengthening vaccination, health monitoring, and strictly carry out antibiotic-free testing and cattle management in accordance with testing requirements. We have also further improved the breeding technology and comprehensively improved the immunity of cattle by improving diet, increasing the content of probiotics and reducing stocking density to effectively reduce the incidence of cattle diseases, thereby reducing the potential demand for antibiotics.

¹⁸ 抗生素：公司的抗生素常用藥品包括普佑寧、氟苯尼考等
Antibiotics: the Company's commonly used antibiotics include Prounion, Florfenicol, etc



- **淘牛檢疫管理**
The Culled Cow Quarantine Management

本公司嚴格遵守《中華人民共和國動物防疫法》、《國家病害動物和病害動物產品生物安全處理規程》、《中華人民共和國食品安全法》、《動物檢疫管理辦法》、《中華人民共和國農業部公告第278號獸藥休藥期相關規定》、《關於建立病死畜禽無害化處理機制的意見》等生物資產出售工作法律法規的要求，制定完整的淘牛管理體系和《生物管理制度》，優化防疫措施，嚴控由於管理不當導致患疫病淘牛的出售。

The Company strictly abides by the requirements of laws and regulations on the sale of biological assets such as the Animal Epidemic Prevention Law of the People's Republic of China, the National Biosafety Treatment Regulations for Diseased Animals and Diseased Animal Products, the Food Safety Law of the People's Republic of China, the Measures for the Administration of Animal Quarantine, the Announcement No. 278 of the Ministry of Agriculture of the People's Republic of China on the Relevant Provisions of the Withdrawal Period of Veterinary Drugs and the Opinions on Establishing a Harmless Treatment Mechanism for Sick and Dead Livestock and Poultry, formulates a complete internal management system and the Management System on Biological Assets, optimizes epidemic prevention measures and strictly controls the sale of infected cattle due to improper management.

各牧場出售前必須通過休藥期，並向當地動物衛生監督機構申報檢疫，保證合規後允許出場；病死牛或死因不明牛，以及經動檢機構檢驗含有疫病的牛隻，需及時進行無害化處理並禁止銷售，牧場嚴格按照牧場環評要求，進行內部處置淘牛，或委託具備國家相關部門許可手續的第三方處置。

All farms can sell cattle only after the drug withdrawal period, and report to the local animal health supervision agency for quarantine to ensure that the cattle are compliant before allowing cattle to enter the market. Sick and dead cattle or cattle with unknown causes of death, as well as cattle that have been inspected by animal inspection agencies to contain diseases, need to be subject to harmless treatment and be prohibited from sale. The farm shall dispose of culled cattle internally in strict accordance with the requirements of the environmental impact assessment of the farm, or entrust a third party with the approval procedures of the relevant state departments to dispose of.



表：2022年現代牧業動物福利關鍵績效：
Table: Animal Welfare Key Performances of Modern Dairy in 2022:

指標名稱 Indicator	指標單位 Unit	2022年 2022
跛行率 ¹⁹ Lameness rate ¹⁹	%	0.53
乳腺炎發病率 Incidence of mastitis	%	1.62
淘汰牛檢疫率 Culled cattle quarantine rate	%	100
奶牛口蹄疫接種覆蓋率 Foot-and-mouth disease vaccination coverage in dairy cows	%	100
抗生素使用率(接受抗生素治療動物百分比) Antibiotic use rate (percentage of animals treated with antibiotics)	%	5

¹⁹ 跛行率：統計口徑為成年母牛跛行率
Lameness rate: only refers to the lameness rate of adult cows



03



守護高品質產業鏈 |
Guaranteeing the High-quality Industrial Chain

3. 守護高品質產業鏈

Guaranteeing the High-quality Industrial Chain

現代牧業將食品品質安全放在首位，將「高品質、高標準」的管理理念貫穿供、產、銷全鏈條，回應豐富多樣的消費者需求，打造未來發展核心競爭力，守護更美好的生活。

Modern Dairy puts food quality and safety in the first place, runs the management concept of “high quality and high standards” throughout the entire chain of supply, production and sales and responds to diverse consumer needs, in a bid to create core competitiveness for future development and guarantee a better life.

3.1 追求卓越品質

Pursuing Excellent Quality

現代牧業建立健全質量管理體系，通過強化質量風險控制、完善檢測監控能力、開展專項質量問題整改等措施，持續完善全過程質量安全管理。2022年，公司未發生食品安全事件，蛋白3.37(g/100g)、脂肪3.78(g/100g)達成工廠目標，實現產量、質量齊頭並進。

Modern Dairy has established a sound quality management system, and continues to improve the quality and safety management of the whole process through measures such as strengthening quality risk control, improving detection and monitoring capabilities and carrying out rectification of special quality problems. In 2022, there were no food safety incidents in the Company, with the protein value being 3.37 (g/100g) and the fat value being 3.78(g/100g), both of which have reached the factory quality target, achieving an increase in both production and quality.

- **質量戰略**
Quality Strategy

現代牧業以一流的全鏈條風險管控和全過程質量管理為基礎，以標準化的檢驗技術、嚴於國家要求的指標標準、數智化的精準管理為抓手，以「高標、高質和零事故」為持續追求，確立原奶高品質發展戰略。

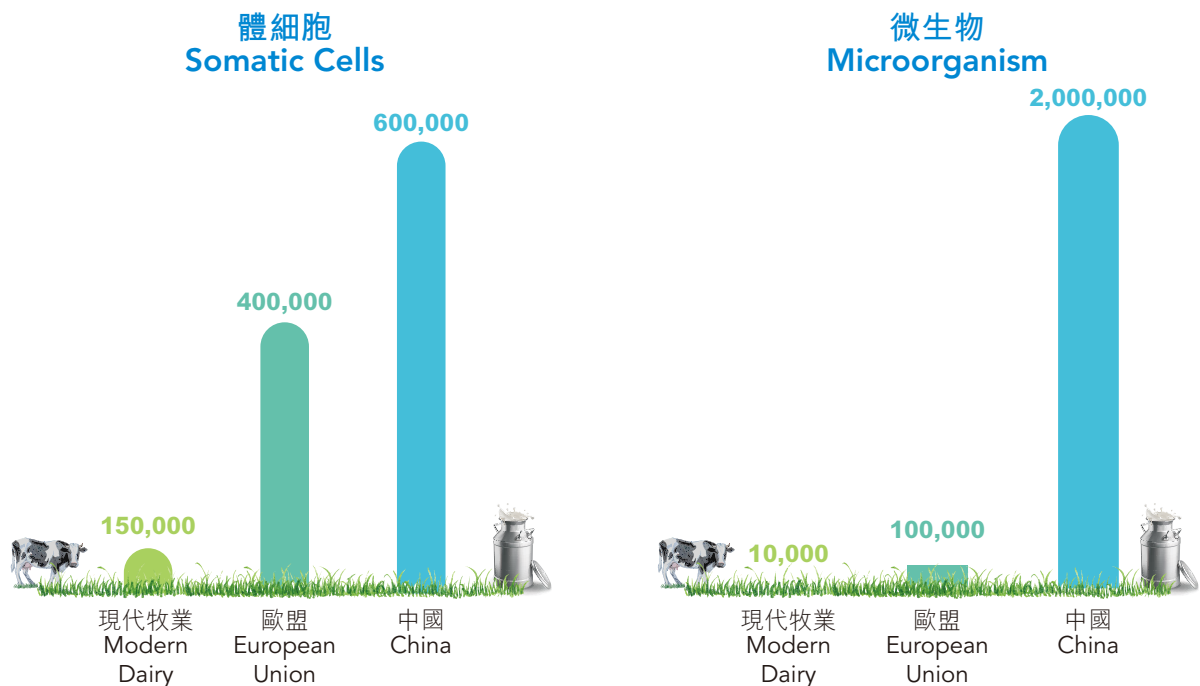
Based on first-class whole-chain risk control and whole-process quality management, Modern Dairy uses standardized inspection technology, indicators and standards that are stricter than the national requirements and digital and intelligent precise management to continuously pursue “high standards, high quality and zero accidents”, thus establishing the high-quality development strategy of raw milk.



- 質量目標**
Quality Goals

現代牧業堅持高起點、高定位、高標準，對標國際標準要求，以先進的生產技術和管理理念，突破核心指標、提高質量指標，實現品質國際化的要求。原料奶中的體細胞數量標準目前在中國相關指引要求是每1毫升不多於60萬個，在歐盟是每1毫升不多於40萬個，現代牧業的標準是每1毫升少於15萬個，比國家和歐盟標準還要嚴謹；微生物數量方面，歐盟的標準是每1毫升原料奶不能高於10萬個菌落形成單位(cfu)，我國的要求不能高於200萬個cfu，現代牧業的要求是每1毫升原料奶少於1萬個cfu。

Modern Dairy adheres to the principle of “high starting point, high positioning and high standards”, benchmarks against international standards, and through advanced production technology and management concepts, breaks through core indicators, improves quality indicators and realizes internationalization of quality. The standard of the number of somatic cells per 1 milliliter (ml) of raw milk is no more than 600 thousand cells according to the PRC relevant guidelines, 400 thousand cells per 1 ml in the European Union, and less than 150 thousand cells per 1 ml in Modern Dairy. The standard of Modern Dairy is more stringent than that of the PRC and European Union. With respect to the number of microorganism, the standard of the European Union is no more than 100 thousand colony-forming unit (cfu) per 1 ml of raw milk, and that of the PRC is no more than 2 million cfu per 1 ml, and that of Modern Dairy is less than 10 thousand cfu per 1 ml of raw milk.



- 質量體系
Quality Systems

現代牧業以「守合規、控風險、保安全」為原則，建立「全鏈條風險管控、全過程質量管理、全員合力提升」的行業一流的質量管理體系，打通雙向管理，提升精準改善的效率。

Based on the principle of “maintaining compliance, controlling risks and ensuring safety”, Modern Dairy has established an industry-leading quality management system featured with “full-chain risk management and control, whole-process quality management and joint-effort improvement” to open up two-way management and improve the efficiency of precision improvement.

現代牧業全面推進全公司的質量、環境及職業健康安全管理体系(QES)三標一體化認證。通過每年一次的全面QES管理體系內審和三年一次的認證機構外部評審相結合的方式，多角度審查，並持續改善管理體系。截至2022年底，集團26家法人單位(31個規模牧場)取得QES認證。

Modern Dairy comprehensively promotes the company-wide “three-in-one” quality system certification of quality, environment and occupational health and safety management system (QES). Through the combination of the annual comprehensive QES management system internal audit and the triennial external assessment by the certification body, we review from multiple perspectives and continue to improve the management system. By the end of 2022, 26 legal entities (31 large-scale farms) of the Group have obtained QES certification.



- **全鏈條風險管理**：從源頭嚴防，嚴格把控牧場投入品質合規；過程嚴管，建立健全食品安全監督檢查體系；風險嚴控，完善風險管理流程，構建全產業鏈風險信息共享互通機制，及時出具風險預案，形成動態風險地圖。

Full-chain risk management and control: Take strict precautions from the source, strictly control the quality and compliance of farms' input; strictly control the process, and establish a sound food safety supervision and inspection system; and strictly control risks, improve the risk management process, and build a risk information sharing mechanism for the entire industry chain, issue risk plans in a timely manner and form dynamic risk maps.

- **全過程質量管理**：橫向從種植－飼養－防治－擠奶－制冷－拉運－檢測七個主要環節執行全鏈條管理，縱向從人、機、料、法、環、測六要素細化管理落實，實現從全面質量管理向全面品質管理的跨越。

Whole-process quality management: Horizontally implement the whole chain management from the seven main links of "planting-breeding-control-milking-refrigeration-transfer-testing", and vertically implement detailed management from the six elements of "personnel, machinery, feed, legality, environment and testing" to realize the leap from total quantity management to total quality management.



- **全員合力提升**：橫向拉通與職能部門的合力，建立信息共享機制(日分析、周預警、月總結、季回顧)，協同職能部門深化質量數據應用，出具專業指導意見，解決質量評審不聚焦、問題整改不徹底等問題，助力牧場進行精準改善；縱向打穿與生產部門的壁壘，建立容錯機制，發揮生產一線主動暴露風險、主動揭發問題的主觀能動性。同時，健全評價機制，壓實質量管理責任。

Joint-effort improvement: Horizontally, open up cooperation with functional departments to establish an information-sharing mechanism (daily analysis, weekly early warning, monthly summary and quarterly review), collaborate with functional departments to deepen the application of quality data, issue professional guidance, solve problems such as unfocused quality review and incomplete rectification of problems, and help the farm to make precise improvements. Vertically, break through the barriers with the production department and establish a fault-tolerant mechanism to give full play to the subjective initiative of the production line to actively expose risks and expose problems. Meanwhile, improve the evaluation mechanism and consolidate the responsibility for quality management.

- 質量管理
Quality Control

現代牧業建立覆蓋全鏈條的「有標準、有流程、有分工、有問責」四有管理機制，實現業務環節卓越高效發展。依據《質量安全管理制度》開展全方位食品安全管理工作，以嚴於國標、嚴於工廠標準為原則，制定企業內部的《質量標準》，並根據《樣品採集》、《檢驗方法》、《檢驗對標管理》等標準執行檢驗項目，確保檢驗結果的真實可靠。

Modern Dairy has established a management mechanism focusing on standards, processes, division of responsibilities and accountability and covering the entire chain, which helps achieve excellent and efficient development of business links. We carry out all-round food safety management in accordance with the Quality and Safety Management System. We have formulated internal quality standards which are stricter than national standards and factory standards. We also inspect items according to the standards of Sample Collection, Inspection Method, Inspection Benchmarking Management and other standards to ensure the authenticity and reliability of the inspection results.

我們與外部團隊協作自主開發了針對自身業務需求的雲雀實驗室信息管理系統(Lark LIMS)，構建牧場管理、安全追溯和質量自動判定的智慧大腦。目前系統已在現代牧業半數以上牧場成功上線應用，為集團的質量追溯奠定下堅實基礎。雲雀實驗室信息管理系統V1.0已通過了國家計算機軟件著作權認證。

We collaborated with an external team to independently develop the Lark Laboratory Information Management System (Lark LIMS) for our own business needs, so as to build a smart brain for farm management, safety traceability and automatic quality judgment. At present, the system has been successfully applied on more than half of the farms of Modern Dairy, laying a solid foundation for the Group's quality traceability. The Lark LIMS V1.0 has passed the national computer software copyright certification.

- 飼料質量管理
Feed Quality Control

現代牧業堅持以好牛自然產好奶的飼養原則，提升飼料品質，強化飼料質量安全管理，建立《物料質量標準制度》、《青貯小麥、燕麥、苜蓿質量控制管理制度》等制度，嚴格把關入場原料、庫存原料質量，確保奶牛健康，保障優質牛奶。2022年，各物料總到場合格率為98.16%，較2021年提升0.8%。2023年，公司建立了大宗原料質量合格率达98.20%目標。

Modern Dairy adheres to the feeding principle of "good cows naturally produce good milk", improves the quality of feed and strengthens the management of feed quality and safety. We have established the Material Quality Standard System, the Silage Wheat, Oat, Alfalfa Quality Control Management System and other systems to strictly control the quality of incoming raw materials and raw materials in stock to ensure the health of dairy cows and high-quality milk. In 2022, the total on-site pass rate of each type of material was 98.16%, an increase of 0.8% from 2021. In 2023, the Company established a target of 98.20% for the pass rate of bulk raw materials.



<p>供應商管理 Supplier management</p>	<p>根據國務院辦公廳〔2018〕43號文件要求，嚴格執行奶牛養殖環節使用的飼料、獸藥等投入品採購前的供應商評審工作。</p> <p>According to the requirements of Document No. [2018] No. 43 of the General Office of the State Council, the supplier review work before the purchase of feed, veterinary drugs and other inputs used in dairy farming is strictly implemented.</p>
<p>入場原料管理 Incoming raw materials management</p>	<p>入場原料質量控制從合規性檢查、感官檢測、衛生指標檢測、理化指標檢測四個方面監控。嚴格以中華人民共和國農業農村部1773號《飼料原料目錄》圈定入場產品種類，依據品質保證部原料檢測計劃要求進行衛生指標和理化指標監測，檢驗均合格方可入場卸貨，否則直接拒收處理。特殊原輔料(新引進、試用、替代原輔料)遵循引入流程，需提報申請，最高至總裁審批。</p> <p>The quality control of incoming raw materials is monitored from four aspects: compliance inspection, sensory inspection, hygiene index inspection, and physical and chemical index inspection. Strictly determine the types of incoming products according to the Feed Raw Material Catalog No. 1773 of the Ministry of Agriculture and Rural Affairs of the People's Republic of China, and carry out monitoring of health indicators and physical and chemical indicators according to the requirements of the raw material testing plan of the quality assurance department. Only those who pass the inspection can enter the site for unloading, otherwise, they will be rejected directly. For special raw and auxiliary materials (newly introduced, trial and substituted raw and auxiliary materials), follow the introduction process and need to submit an application to the top, even to the president for approval.</p>
<p>庫存原料管理 Management of raw materials in stock</p>	<p>對庫存原料品質保持持續監控，每日對飼餵道TMR日糧進行感官檢查，依據檢驗計劃對TMR日糧黃曲霉毒素及相關指標進行監控，任何超出企業內控標準／和國家限量標準的原料嚴格按照不合格原料標準處理。</p> <p>Maintain continuous monitoring of the quality of the raw materials in stock, conduct sensory inspections of the TMR diets in the feeding channel every day, and monitor the aflatoxins and related indicators of the TMR diets according to the inspection plan. Any raw materials that exceed our internal control standards/national standards will be disposed of in strict accordance with the standards for unqualified raw materials.</p>





雲南牧場榮獲2022年雲南省青貯飼料質量評鑒大賽金獎
Yunnan Farm won the gold medal in the 2022 Yunnan Silage Quality Evaluation Competition

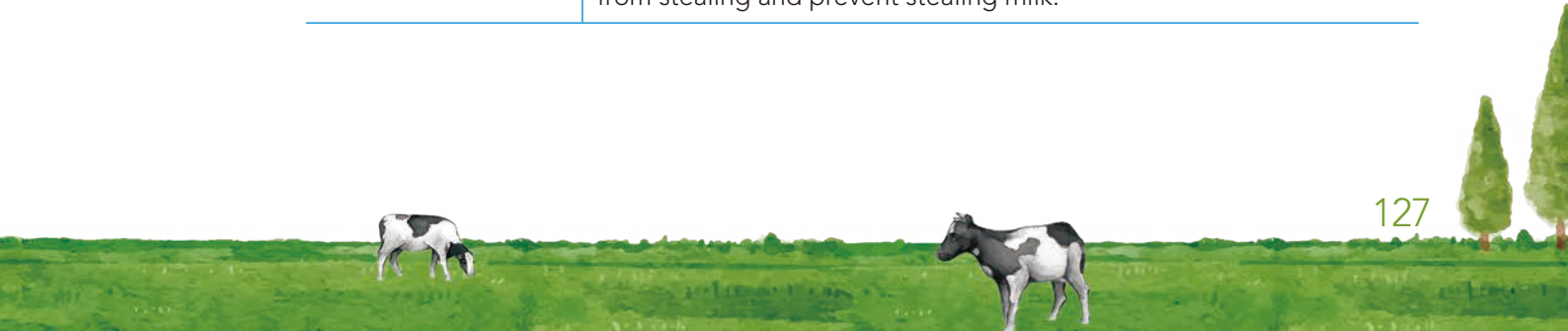
— 原奶質量控制
Raw Milk Quality Control

現代牧業堅持「好牛自然產好奶」的品牌理念，高度重視原奶產品質量，將原奶合格率保持在100%作為原奶產品質量的重要衡量目標與企業長遠發展的生命線。各個牧場加強生產加工、物流倉儲環節的監測力度，從每一個環節規避質量安全隱患。報告期內，原奶合格率达到100%，未發生質量安全事故，牛奶衛生指標優於歐盟標準。

Modern Dairy adheres to the brand concept of “good cows naturally produce good milk”, attaches great importance to the quality of raw milk products, and keeps the pass rate of raw milk at 100% as an important measurement goal of raw milk product quality and the lifeline of its long-term development. Each farm strengthens the monitoring of production, processing, logistics and warehousing links, so as to avoid hidden dangers of quality and safety in every link. During the reporting period, the pass rate of raw milk reached 100%, no quality and safety accidents occurred, and the milk hygiene indicators were better than the EU standards.



<p>原奶生產 Raw milk production</p>	<p>原奶生產全過程依據各項SOP執行，嚴禁出現混群，控制生乳無污染；為保證生產設備清潔，依據原奶年度檢測計劃對生產設備進行清潔和生產塗抹，驗證清洗效果；人牛接觸環節嚴格規範操作流程和實施消毒措施，避免奶牛感染乳房炎的風險。2022年新增嗜冷菌的檢測和管控，加強原奶質量的精細化要求，目前全集團嗜冷菌達成率高達96.58%，同比提高6.1%。</p> <p>The whole process of raw milk production is carried out in accordance with various SOPs, mixing groups is strictly prohibited, and raw milk is controlled to be pollution-free. In order to ensure the cleanliness of the production equipment, cleaning and production smearing shall be carried out according to the requirements of the production equipment in the raw milk annual inspection plan, and the cleaning effect must be verified. In the human-cattle contact links, strictly standardize the operation process and implement disinfection measures to avoid the risk of cows being infected with mastitis. In 2022, the detection and control of psychrophilic bacteria was added, and the refinement requirements for the quality of raw milk were also strengthened. At present, the achievement rate of psychrophilic bacteria in the whole group is as high as 96.58%, a year-on-year increase of 6.1%.</p>
<p>原奶運輸 Raw milk transportation</p>	<p>避免運輸環節的食品安全风险，公司按照奶車檢查細則對奶車進行准入檢查和年度例行檢查，原奶在運輸途中密封保存，通過錄像確保入拆封場查驗過程全程合規；嚴控原奶入場前的儲存期限，及時監控原奶各項指標符合入場標準。2022年，增設車輛(奶車)出入管理系統，通過牧場智能化門禁和升級過磅系統，達到精準化管理，杜絕奶車偷奶、盜奶情況的發生。</p> <p>To avoid food safety risks in the transportation process, the Company conducts access inspections and annual routine inspections on milk trucks in accordance with the milk truck inspection rules, and the raw milk is sealed and stored during transportation, with video recordings used to ensure compliance throughout the inspection process of entering the unpacking field. Strictly control the storage period of raw milk before entering, and timely monitor the indicators of raw milk to meet the admission standards. In 2022, a vehicle (milk truck) entry and exit management system was added. Through the intelligent access control of the farm and the upgraded weighing system, precise management will be achieved to prevent milk trucks from stealing and prevent stealing milk.</p>



不合規品處理
Disposal of non-compliant products

當原奶自檢理化指標低於乳企接收標準、原奶自檢食品安全指標(污染物、獸藥殘留、激素、真菌毒素等)超出內控標準或乳企拒收時，合規處理並跟蹤處理結果。牧場需出具原奶不合格報告單，報告需涵蓋原因分析、糾正預防措施及效果驗證等內容。

When the physical and chemical indicators of raw milk in the self-inspection are lower than the acceptance standards of dairy enterprises, the food safety indicators (contaminants, veterinary drug residues, hormones, mycotoxins) of raw milk in the self-inspection exceed the internal control standards, or the dairy enterprises refuse to accept them, they will be handled in compliance with the regulations and the processing results will be tracked. The farm shall issue a report on unqualified raw milk, setting out cause analysis, corrective and preventive measures and effect verification.



榮獲優秀乳品加工企業稱號

The "Excellent Dairy Processing Enterprise" Award



世界食品品鑒大會金獎純奶證書

The Gold Award Pure Milk of Monde Selection



世界食品品鑒大會200ML金獎證書

The Gold Quality for High Calcium Milk (200ml) of Monde Selection



案例
Case study

現代牧業發布優質乳工程項目成果
Modern Dairy released the results of the “High-Quality Milk Project”

現代牧業作為「優質乳工程」第一批踐行者，於2014年9月在國內率先實施「優質乳工程」優質UHT滅菌奶項目。2022年，國家奶業科技創新聯盟對現代牧業的16家牧場(共99,567頭奶牛)的生乳和養殖情況開展了優質乳工程評價及驗收，16個新增牧場全部順利通過「優質乳工程-特級乳」成果驗收，生乳的各項指標均符合《生乳用途分級技術規範》(T/TDSTIA 001-2019)特優級生乳標準。並且，16家牧場的體細胞數和菌落總數均優於歐美和澳新等奶業發達國家限量標準。此外，現代牧業發布了《現代牧業優質乳工程評價成果白皮書》，為行業發展提供了有力的技術支撐。

As the first batch of practitioners of the “High-Quality Milk Project”, Modern Dairy took the lead in implementing the high-quality UHT sterilized milk project of the “High-Quality Milk Project” in China in September 2014. In 2022, the National Dairy Science and Technology Innovation Alliance carried out the evaluation and acceptance of high-quality milk projects on the raw milk and breeding conditions of 16 farms under Modern Dairy (a total of 99,567 cows). The 16 newly-added farms had all successfully passed the “High-quality Milk Project-Superior Milk” achievement inspection, and all indicators of raw milk were in line with the Technical Specifications for Classification of Raw Milk Uses (T/TDSTIA 001-2019) super-high-quality raw milk standards. Moreover, the somatic cell count and the total bacterial count of 16 farms were all better than the limit standards of developed dairy countries such as Europe, America, Australia and New Zealand. In addition, Modern Dairy released the White Paper on the Evaluation Results of Modern Dairy High-quality Milk Project, which provided strong technical support for the development of the industry.

國家奶業科技創新聯盟又先後授予現代牧業總裁孫玉剛「優質乳工程助力國民營養計劃功臣獎」，以及2022年通過優質乳認證的16家牧場「現代牧業優質乳工程標桿牧場」和「現代牧業優質乳工程示範牧場」獎牌，對現代牧業在優質乳工程中所做工作給予了高度認可。

The National Dairy Industry Science and Technology Innovation Alliance successively awarded Sun Yugang, the CEO of Modern Dairy, the “High-quality Milk Project Contributing to the National Nutrition Plan Contributor Award”, and awarded 16 farms that passed the high-quality milk certification in 2022 the “Modern Dairy High-quality Dairy Engineering Benchmark Farm Award” and “Modern Dairy High-quality Dairy Engineering Demonstration Farm Award”, highly recognizing the work done by Modern Dairy in the high-quality milk project.





- **食品安全風險防控**
Food Safety Risk Prevention and Control

現代牧業對質量風險進行識別預防，圍繞牧場食品安全關鍵控制點，依據質量安全控制流程，從供應商管理、原料、獸藥、原奶生產、原奶出場等環節開展食品安全評審，通過審核完善牧場質量管理關鍵環節，推動原奶質量安全保障水平持續提升。

Modern Dairy identifies and prevents quality risks. Focusing on the key control points of farm food safety and in accordance with the quality and safety control process, food safety reviews are carried out from the aspects of supplier management, raw materials, veterinary drugs, raw milk production and raw milk exit, and through auditing and improving the key links of farm quality management, the level of raw milk quality and safety assurance will be continuously improved.



<p>推進三級評審 Promoting three-level review</p>	<ul style="list-style-type: none"> - 建立一級外部聯動評審，二級職能中心評審和三級運營單位自審的多層級審查模式。綜合評估從原料採買到原奶到廠各環節的食品安全風險，根據考核結果評估牧場表現，並作為年度排名和獎項評比的關鍵參考項。 Establish a multi-level review mode in which the first level is external linkage review, the second level is functional center's review, and the third level is self-examination by operating units. Comprehensively evaluate the food safety risks in all links from raw material procurement to raw milk arriving at the factory, evaluate the performance of the farms based on the assessment results which will also be used as a key reference for annual rankings and awards. - 對評審過程中發現的問題、對食品安全影響的嚴重程度、牛隻健康影響的嚴重程度以及重複發生的次數進行綜合評價；年度綜合得分納入對牧場的獎項評比中，並執行年度總分數排名；各業務單元根據評審問題，限期整改，並要求接受整改的效果驗證。 Conduct a comprehensive evaluation based on the problems found during the review process, the severity of the impact on food safety, the severity of the impact on the health of cattle, and the number of recurrences The annual comprehensive score is included in the award evaluation of the farms, and the ranking list is prepared based on the annual total score. Each business unit rectifies within a time limit based on the review issues, and is required to accept the verification of the effect of the rectification.
<p>完善風險監控能力 Improving risk monitoring capabilities</p>	<ul style="list-style-type: none"> - 通過持續對標國標和同業要求，及時調整風險控制點，保證風控工作的有效性。同時，開展品嘗師能力認證及技術交流，擴大品嘗師專業技術隊伍。2022年，公司調整原奶年度風險監控項目及內控標準合計20餘項，品嘗師能力新認證合格87人，專業人員提升3倍。 By continuously benchmarking national standards and industry requirements, timely adjust risk control points to ensure the effectiveness of risk control. At the same time, carry out taster ability certification and technical exchanges to expand the professional and technical team of tasters. In 2022, the Company adjusted more than 20 annual raw milk risk monitoring items and internal control standards, with 87 newly certified tasters, and the number of professionals increased by 3 times.



- **產品召回管理**
Product Recall Management

現代牧業堅持「不合格供應商不合作，不合格物料不入場，不合格物料不轉庫，不合格奶車不打奶，不合格原奶不出場」的「五不」原則，落實從採購、到場、庫存、運輸到原奶生產的各環節質量的嚴格把控，將風險控制前置。報告期內，未發生產品召回、市場禁令事件，未發生因安全與健康理由而進行回收情況。

By adhering to the principle of “no cooperation from unqualified suppliers, no admission of unqualified materials, no transfer of unqualified materials to the warehouse, no milking of unqualified milk trucks and no exit of unqualified raw milk”, Modern Dairy strictly controls the quality of each link from procurement, arrival, inventory, transportation to raw milk production, and prioritizes risk control. During the reporting period, there were no product recalls, market bans, or recalls due to safety and health reasons.

- **營養與健康**
Nutrition and Health

現代牧業積極探索，不斷優化和拓展原料奶種類，實現原奶蛋白質多元化，推進原奶營養健康計劃。目前，原料奶中富含蛋白類原料9種：豆粕，膨化大豆，過瘤胃豆粕，雙低菜粕，DDGS，啤酒糟，芝麻粕，噴漿玉米皮，過瘤胃蛋氨酸。2023年預計增加棉粕、非蛋白氮類2種，馬鞍山牧場、寶雞牧場已啟動預混料配方替換的試驗流程，並對試驗數據跟蹤，逐步優化。

Modern Dairy actively explores, continuously optimizes and expands the types of raw materials to realize the diversification of raw milk protein and promotes the raw milk nutrition and health plan. Currently, there are 9 kinds of protein-rich raw materials in raw milk: soybean meal, puffed soybeans, rumen bean meal, canolamcal, DDGS, beer's spent grains, sesame meal, spray corn bran, rumen methionine. In 2023, it is expected to have two more kinds of feeds which are non-protein nitrogen and cotton meal. Ma'anshan Farm and Baoji Farm have initiated the experimental process of replacing premix formula and gradually optimized it by tracking experimental data.

2022年，現代牧業在客戶服務方面的關鍵績效如下：

The key performance of Modern Dairy in terms of customer services in 2022 is as follows:

指標名稱 Indicators	指標單位 Unit	2022年 2022
產品及服務投訴數 Product and service complaints	件 Pieces	0
客戶滿意度 ²⁰ Customer satisfaction ²⁰	%	100
已售或已運送產品中因安全與健康理由而回收的比例 Percentage of sold or shipped products recalled for safety and health reasons	%	0

²⁰ 客戶服務滿意度：只涉及原奶銷售業務
Customer satisfaction: only involved the sale of raw milk



3.2 提供優質服務

Providing Quality Services

本公司嚴格遵守《中華人民共和國消費者權益保護法》《中華人民共和國廣告法》等法律法規的要求，制定《產品投訴補貨管理辦法》等內部制度，落實維護消費者合法權益。

The Company strictly abides by the requirements of the Consumer Rights Protection Law of the People's Republic of China, the Advertising Law of the People's Republic of China and other laws and regulations, and formulates internal systems such as the Product Complaints and Replenishment Management Measures to implement and safeguard the legitimate rights and interests of consumers.

- **客戶服務**
Customer Services

現代牧業致力於為客戶提供高質量產品和服務，公司以「制度保障業務，創新促進業務和措施成就業務」為驅動，建立《生鮮乳銷售管理制度》，加強綜合物流管理，安全高效開展客戶服務。

Modern Dairy is committed to providing customers with high-quality products and services. Driven by the idea of "system guaranteeing business, innovation promoting business and measures contributing to business", the Company has established the Raw Milk Sales Management System to strengthen comprehensive logistics management and provide safe and efficient customer services.

為保證產品安全及時送達，各牧場嚴格生乳銷售環節的質量把控，實施全過程、全方位的實時監控追蹤，建立與客戶的溝通渠道，確保信息互通，及時發現服務過程中的問題並及時提供解決方案。合理調度配送車輛，將特殊情況和風險評估工作前置，落實運力保障工作。

In order to ensure the safe and timely delivery of products, each farm strictly controls the quality of raw milk sales, implements full-process and all-round real-time monitoring and tracking, and establishes communication channels with customers, so as to ensure information exchange and timely discover problems in the service process and provide solutions in a timely manner. We rationally dispatch delivery vehicles and pre-empt special circumstances and risk assessment work to guarantee transportation capacity.

我們時刻關注客戶評價，定期收集數據進行消費者滿意度分析，洞察客戶深層需求，優化管理體系，改進生產工藝。對於客戶反饋，公司建立完善處置流程，及時妥善處理，與客戶建立相互信任的可持續友好關係。報告期內，公司未發生產品及服務投訴。

We always pay attention to customer evaluations, regularly collect data for customer satisfaction analysis, in order to gain insight into customers' deep needs, optimize management systems, and improve production processes. For customer feedback, the Company has established a complete handling process and will handle it properly and in a timely manner, so as to establish a sustainable and friendly relationship of mutual trust with customers. During the reporting period, the Company did not receive any complaints about products and services.

- 信息安全
Information Security

現代牧業高度重視客戶信息安全，健全保密制度和預防措施，嚴防客戶隱私信息泄露，避免造成潛在風險。公司正在積極推進網絡安全管理的相關工作，定期對集團的信息安全管理情況進行全面的審計，持續監督管理體系的有效性。

Modern Dairy attaches great importance to the security of customer information, improves the confidentiality system and preventive measures, and strictly prevents the leakage of customer privacy information to avoid potential risks. The Company is actively promoting the work related to network security management, and conducts comprehensive audits on the Group's information security management on a regular basis to continuously monitor the effectiveness of the management system.

- 信息安全管理
Information Security Management

本集團副總裁負責對公司信息安全相關的重大事宜進行決策和監督，信息技術部作為牽頭部門，開展日常運營中信息安全的監督和信息系統維護工作。公司內部建立《信息安全管理制度》，內容覆蓋安全紅線、辦公安全、基礎安全、安全管理等方面，明確集團全體員工在信息安全管理方面的基本守則，按照「誰使用，誰負責」的原則管理使用的所有信息化設備。

The deputy CEO of the Group is responsible for making decisions and supervising major issues related to the Company's information security, while the information technology department, as the leading department, carries out information security supervision and information system maintenance in daily operations. The Company has established the Information Security Management System, which covers security red lines, office security, basic security and security management. It also clarifies the basic rules of information security management for all employees of the Group, and stipulates that all information equipment should be used based on the accountability system.



– 信息安全運營
Information Security Operations

在信息安全運營方面，公司不斷完善公司網絡與信息安全事件應急工作機制，建立網絡與信息安全事件應急預案，規範網絡與信息安全事件工作流程，提高公司的網絡與信息安全應急處置能力，預防和減少網絡與信息安全事件造成的損失和危害，保障公司業務正常開展。

In terms of information security operations, the Company continues to improve the emergency response mechanism for network and information security incidents and has established the Emergency Plan for Network and Information Security Incidents to standardize the workflow of network and information security incidents, improve the Company's network and information security emergency response capabilities, prevent and reduce losses and hazards caused by network and information security incidents and ensure the normal development of the Company's business.

以事件分級管理體系為基礎，搭建了覆蓋監測預警、應急響應、調查評估的全鏈條安全控制流程及匯報機制，信息技術部及時將事態發展情況報集團辦公室。

Based on the event classification management system, a full-chain security control process and reporting mechanism covering monitoring and early warning, emergency response, investigation and evaluation has been established, and the information technology department will report the development of the situation to the Group Office in a timely manner.

- **監測與預警：**將網絡與信息安全事件預警等級分為從高到低四級：紅色(特別重大)、橙色(重大)、黃色(較大)和藍色(一般)。信息技術部組織對全集團網絡安全威脅進行監測，通過多種途徑監測、匯聚漏洞、病毒、網絡攻擊等網絡安全威脅信息；各單位加強對所建網絡和信息系統的網絡安全威脅監測，對發現的威脅及時進行處置和上報信息技術部；信息技術部對監測信息進行研判分析，採取進一步預警響應措施。

Monitoring and early warning: The network and information security incidents are divided into four levels from high to low, namely red (extremely serious), orange (major), yellow (large) and blue (general). The information technology department organizes the monitoring of the network security threats of the whole group, monitors and aggregates network security threat information such as vulnerabilities, viruses, and network attacks through various channels. All units strengthen the monitoring of network security threats to the established network and information systems, and promptly handle and report the threats found to the information technology department. The information technology department conducts research, judgment and analysis on the monitoring information, and takes further early warning and response measures.

- **應急響應：**事發單位應立即啓動專項應急預案，盡最大努力將影響降到最低；信息技術部進行研判，依據網絡安全事件的響應級別，結合專項應急預案，採取各種技術措施和管控手段，控制事件蔓延。

Emergency response: The incident unit should immediately launch a special emergency plan to do its best to minimize the impact. The information technology department conducts research and judgment, and adopts various technical measures and control methods according to the response level of the network security incident and under the special emergency plan to control the spread of the incident.

- **調查評估：**組織開展調查處理和總結評估工作，定期向公司高層報告網絡安全事件調查評估結果。

Investigation and evaluation: Organize the investigation, processing, summary and evaluation work, and regularly report the results of the investigation and evaluation of network security incidents to the Company's senior management.

— 信息安全考核

Information Security Assessment

公司要求重要崗位簽署《保密協議》，任何違反信息安全管理制度的行為，公司將參照《現代牧業員工獎懲制度》按照情節嚴重程度，進行警告、記過、記大過、降級、撤職、解除合同等不同程度的處罰。

The Company requests the employees at the key posts to sign the Confidentiality Agreement. For any behavior that violates the information security management system, the Company will impose warnings, demerits, major demerits, demotion, dismissal, and termination of contracts in accordance with the Modern Dairy Employee Reward and Punishment System depending on the severity of the circumstances.



- 信息安全意識培訓
Information Security Awareness Training

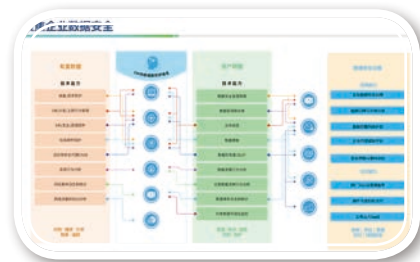
公司全面提升安全人員的自身素質和技能，培養全員信息安全保護意識，定期以視頻會議形式對員工進行網絡安全知識賦能培訓。

The Company comprehensively improves the quality and skills of security personnel, and cultivates awareness of information security protection for all employees. The Company regularly conducts network security knowledge empowerment training for employees in the form of video conferences.

信息安全意識培訓
Information Security Awareness Training

2022年5月19日，信息技術部對新牧場進行線上賦能，賦能涵蓋了牧場信息系統的使用及數據填報的規範，重點培訓信息安全的重要性。要求主管級以上領導參加培訓，並在會後對牧場的其他員工進行分班次賦能培訓。

On 19 May 2022, the Information Technology Department carried out online empowerment for the new farms, covering the use of the farm information system and the specification of data reporting and emphasizing the importance of information security. The employees above the managerial level of the farms were requested to participate in the training and conduct empowerment training for other shifts of employees of the farm after the training session.



3.3 可持續供應鏈 Sustainable Supply Chain

現代牧業積極構建陽光健康的供求關係，踐行責任採購承諾，堅持全流程管控理念，在入庫、評估、退出等環節開展全生命週期的供應鏈風險識別與管控工作。未來，現代牧業將保持與供應商的積極溝通，共同推進原材料的溯源工作，持續降低供應鏈風險。持續對供應商實行分類管理，以「六大維度」即合作量價、供應保障、供貨質量、合同履約、安全管理、合作配合度，對供應商動態考核及不良行為處理，剔除劣質供應商，吸收更多優秀供應商，進一步優化健全供應商資源庫，始終保持以最佳的競爭優勢保障企業效益，發展可持續供應鏈。

Modern Dairy actively builds a transparent and healthy relationship between supply and demand, implements its commitment to responsible procurement, and adheres to the concept of whole-process management and control, and carries out supply chain risk identification and management of the entire life cycle in links such as warehousing, evaluation, and withdrawal. In the future, Modern Dairy will maintain active communication with suppliers, jointly promote the traceability of raw materials, and continue to reduce supply chain risks. The Company continues to implement classified management of suppliers, and use the 「six major dimensions」, namely, cooperative volume and price, supply guarantee, product quality, contract performance, safety management, and cooperation degree, dynamically assessing suppliers, dealing with bad behavior, eliminating low-quality suppliers and introducing more excellent suppliers, to further optimize and improve the supplier resource pool, to always maintain the best competitive advantage to guarantee corporate benefits and to develop sustainable supply chains.



• 採購供應戰略
Procurement and Supply Strategy

現代牧業以「踐行陽光採購，創造戰略價值」為願景，建立以成本效益最大化、質量管理體系化、庫存管理精細化和流程最優化為四大驅動力的價值鏈管理戰略。

With the vision of "Practice Sunshine Procurement and Create Strategic Value", Modern Dairy has established a value chain management strategy with the four driving forces, namely "maximizing cost-effectiveness, systematizing quality management, refining inventory management and optimizing management processes".

採購供應戰略屋 Procurement and Supply Strategy House



- 供應商管理體系
Supplier Management System

公司基於聯合國全球契約(UNGC)十項原則可持續發展指引和《現代牧業道德準則》對供應商關鍵行為的要求，建立了融合ESG理念的供應商運行管理體系。此外，公司持續強化採購戰略及業務流程中對環境和社會風險的識別、防範，建設可持續、穩定的供應商隊伍。

Based on the ten principles of the United Nations Global Compact (UNGC) sustainable development guidelines and the requirements of the Code of Ethics of Modern Dairy for key behaviors of suppliers, the Company has established a supplier operation management system that integrates ESG concepts. In addition, the Company continues to strengthen the identification and prevention of environmental and social risks in procurement strategies and business processes, and builds a sustainable and stable supplier team.

現代牧業公開發佈《供應商行為準則》²¹，要求所有供應商承諾以下內容：

The Company publicly released the “Supplier Code of Conduct”²¹ and required all suppliers to commit to the following:

- 遵守運營所在地國家和地方相關法律法規，尊重當地社區和利益相關方的權利和利益。
Comply with the relevant national and local laws and regulations of the country where we operate and respect the rights and interests of local communities and stakeholders.
- 誠實、公平、透明地開展業務活動，不從事任何形式的賄賂、腐敗、欺詐或不正當競爭。
Conduct business activities honestly, fairly, transparently, and do not engage in any form of bribery, corruption, fraud or unfair competition.
- 不提供或接受任何可能影響業務決策或損害我們聲譽的禮物或娛樂。
Do not offer or accept any gifts or entertainment that may influence business decisions or damage our reputation.
- 保護我們及我們客戶的機密資產和信息，不洩露、濫用或誤用這些資產和信息。
Protect our and our customers’ confidential assets and information, and do not disclose, misuse or abuse these assets and information.
- 保護個人信息和隱私，遵守所有適用的數據保護法律和法規。
Protect personal information and privacy and comply with all applicable data protection laws and regulations.

²¹ 《供應商行為準則》於公司官網連結：

The link of Supplier Code of Conduct in the Company's official website:

https://www.ir-cloud.com/hongkong/01117/irwebsite/docs/Supplier_Code_of_Conduct.pdf



- 尊重員工的人權和尊嚴，不容忍任何形式的奴役、強迫勞動、童工、歧視、騷擾或虐待。根據當地法律，尊重所有員工自願組建和加入工會、進行集體談判與和平集會以及拒絕參加此等活動的權利。
Respect the human rights and dignity of employees, and do not tolerate any form of slavery, forced labor, child labor, discrimination, harassment or abuse. Respect the right of all employees to voluntarily form and join unions, engage in collective bargaining and peaceful assembly, and to refuse to participate in such activities in accordance with local laws.
- 遵守所有適用的與工作時間、休息、工資和福利相關的法律法規。
Comply with all applicable laws and regulations related to working hours, breaks, wages and benefits.
- 提供一個安全、健康、無暴力的工作環境，遵守所有適用的健康和 safety 法律和法規，預防事故和傷害。
Provide a safe, healthy, violence-free work environment, comply with all applicable health and safety laws and regulations, prevent accidents and injuries.
- 提供的所有產品和服務必須達到本公司要求的品質和安全標準。
All products and services provided must meet the quality and safety standards required by the Company.
- 採取措施減少對環境的負面影響，遵守所有適用的環境法律和法規，提高資源利用效率，降低廢棄物排放，減少溫室氣體排放，鼓勵無森林砍伐認證，保護生物多樣性。
Take measures to reduce the negative impact on the environment, comply with all applicable environmental laws and regulations, improve resource utilization efficiency, reduce waste emissions, reduce greenhouse gas emissions, encourage deforestation-free certification and conserve biodiversity.
- 支持和參與與本準則相關主題的研究、教育、培訓、宣傳等活動，提高員工和公眾在相關議題的意識和能力。
Support and participate in research, education, training, advocacy and other activities related to the topics covered by this Code and raise the awareness and capacity of employees and the public on these issues.
- 定期報告對本準則的遵守情況和績效，並接受我們或第三方機構的審查和評估，並不斷改進。
Report their compliance with this Code regularly, and accept our or third-party review and evaluation, and continuously improve.



- 供應商准入
Supplier Access

公司對供應商實施准入管理，由質檢相關部門和需求單位共同組成評審小組，依據《質量安全管理》和各類物資評審標準，對新進供應商進行准入評審。嚴格審核供應商資質，確認審查資料有效合規；評審結果依據現場評審、文件評審和抽樣檢驗的綜合表現，形成《供應商綜合評價表》，合格後判定准入。

The Company implements access management for suppliers. The review team is composed of relevant quality inspection departments and demand units, and conducts access review for new suppliers in accordance with the Quality and Safety Management and various material review standards. We strictly review the qualifications of suppliers to confirm that the review materials are valid and compliant. The review results are based on the comprehensive performance of on-site review, document review and sampling inspection to form the Supplier Comprehensive Evaluation Form, and access will be granted after passing the test.

供應商環境指標及社會指標也作為供應商准入評審的重要指標，其中，飼料類供應商的准入標準包括對勞工安全與健康保障、品控管理及可追溯性、生產過程控制及可追溯性、召回及投訴處理、人力資源等環境及社會方面的考量。

Supplier environmental indicators and social indicators will also be used as important indicators for supplier access review. Among them, the access standards for feed suppliers include environmental and social considerations such as labor safety and health protection, quality control management and traceability, production process control and traceability, recall and complaint handling and human resources.

在合作尋源和准入評審全過程秉承公開、公平、公正、誠信的原則，依托線上招採平台和供應商管理平台的協同管理，增加准入流程的透明度。此外，誠信合作作為建立可持續合作關係的基石，《陽光協議》被作為關鍵條款納入採購合同，並要求准入供應商100%簽署率。

Adhere to the principles of openness, fairness, impartiality and integrity in the whole process of cooperative sourcing and access review, and rely on the collaborative management of the online recruitment platform and supplier management platform to increase the transparency of the access process. In addition, honest cooperation is the cornerstone of establishing a sustainable cooperative relationship. The "Sunshine Agreement" is included as a key clause in the procurement contracts, and all admitted suppliers are required to sign.



合作雙方必須共同遵守以下承諾：

Both parties must abide by the following commitments:

- 堅守誠信原則，在合作過程中不以任何方式賄賂對方公司工作人員及特定關係人，不發生舞弊、腐敗、欺詐行為。
Adhere to the principle of good faith, do not bribe the staff of the other company or specific related parties in any way during the cooperation process, and do not commit fraud, corruption, or fraud.
- 在執行業務合作中，雙方均不得採用隱瞞、欺騙等手段侵佔另一方財物，或損害另一方其他合法利益。
In the implementation of business cooperation, both parties shall not use concealment, deception and other means to embezzle the property of the other party, or damage other legal interests of the other party.
- 雙方均不得向對方或對方工作人員或特定關係人索要、收受、提供、給予合同約定外的任何利益，包括但不限於明扣、暗扣、現金、購物卡、實物、有價證券、旅遊或其他非物質性利益等。
Neither party shall solicit, accept, provide, or give any benefits other than those agreed in the contract to the other party or the other party's staff or specific related parties, including but not limited to open deductions, concealed deductions, cash, shopping cards, benefits in kind, securities, travel or other non-material benefits, etc.

- **關鍵供應商識別**
Identification of Key Suppliers

現代牧業依據質量風險等級、供應商類別、物料類別，對供應商三級劃分，採取分級管控，明確合作範圍，確定評審方式。目前，公司針對一級供應商執行更嚴格的評審要求，實施100%現場評審，預防和規避相關風險發生。截至2022年末，關鍵一級供應商數量共計117家，採購金額佔比71%。

Modern Dairy divides suppliers into three levels based on quality risk level, supplier category and material category, and adopts hierarchical control to clarify the scope of cooperation and determine the review method. At present, the Company implements stricter review requirements for first-tier suppliers, and conducts 100% on-site review to prevent and avoid related risks. As of the end of 2022, there were a total of 117 key first-tier suppliers, accounting for 71% of our procurement amount.

表：2022年現代牧業供應商關鍵績效：
Table: Key Performances of Modern Dairy's Suppliers in 2022:

指標名稱 Indicators		指標單位 Unit	2022年 2022
飼料採購量及比例 Purchase Amount and Proportion of Feeds	豆粕 Soybean meal	噸 Tons	240,915
		%	5
	棉籽 Cottonseeds	噸 tons	62,530
		%	1
	苜蓿類 Alfalfa	噸 tons	259,604
		%	6
	玉米類 Corn	噸 tons	3,015,151
		%	64
	其他飼草料 Others	噸 tons	1,135,968
		%	24



指標名稱
Indicators

指標單位
Unit

2022年
2022

指標名稱 Indicators		指標單位 Unit	2022年 2022
按品類劃分的供應商數量及比例 Number and Percentage of Suppliers by Category	精飼料 Concentrated feed	個 Supplier	151
		%	23.34
	粗飼料 Roughage	個 Supplier	128
		%	19.78
	添加劑類 Additives	個 Supplier	74
		%	11.44
	墊料類 Beddings	個 Supplier	74
		%	11.44
	物流類 Logistics	個 Supplier	18
		%	2.78
	輔料 Excipients	個 Supplier	202
		%	31.22



- 供應商評審和整改
Supplier Review and Rectification

現代牧業對原材料供應商採取定期或不定期審核，包含文件稽核、現場稽核等，並隨機開展第三方審核。針對審核所發現的問題，要求供應商提出改善計劃，於期限內完成改善措施。現代牧業針對改善計劃查驗其落實狀況。

Modern Dairy adopts regular or irregular audits on raw material suppliers, including document audits, on-site audits, etc., and conducts random third-party audits. For the problems found in the audit, the supplier is required to propose an improvement plan, complete the improvement measures within the time limit, and check the implementation status of the improvement plan.

根據《供應商評審表》，對供應商進行風險評審，從質量管理，人員管理，產品包裝、數量和到貨及時性，現場作業及工作環境，生產環節，環保管理，文檔管理及運輸車輛車況等多維度評估。定期（每月）對全部供應商進行例行全方位評審，以識別供應鏈各環節的環境及社會風險。尤其是針對特殊物料的定期抽查以及供應商在供應過程中有無超標排放廢水等危害環境的行為存在，完成供應商週期性的業務回顧。

According to the "Supplier Review Form", Modern Dairy conducts a risk review of suppliers, such as quality management, personnel management, product packaging, quantity and arrival, promptness, on-site operation and working environment, production process, environmental protection management, document management, transport vehicle condition and other multi-dimensional evaluation. We regularly (on a monthly basis) conduct a routine comprehensive review of all suppliers to identify environmental and social risks in each link of the supply chain, especially for the regular spot check of special materials and whether the supplier has exceeded the standard discharge of waste water and other environmental hazards in the supply process, and complete the periodic business review of the supplier.

根據評審小組綜合評價、評分情況，將供應商分為「優秀（長期合作）、良好（持續合作）、合格（合作預警）、不合格（責令限期整改）」四個等級，依據等級管理要求，確定對供應商進一步的審核要求和合作方式。被判定不合格的供應商，需要依據《供應商整改問題函》進行限期整改，並實行整改全過程的持續監督，以保證供應商整改的有效性。針對重大風險事件，包括弄虛作假、違背陽光協議、使用存在嚴重安全風險的原料等紅線，在評審中執行一票否決和立即取消合作的處理，並列入供應商黑名單。報告期內，因部分供應商未遵守雙方簽訂的合同，淘汰供應商7個。

According to the comprehensive evaluation and scoring situation of the review team, we divide the suppliers into four grades: "excellent (long-term cooperation), good (continuous cooperation), qualified (cooperation early warning), and unqualified (order to rectify within a time limit)", and determine further audit requirements and cooperation methods for suppliers according to the level management requirements. Suppliers who are determined to be unqualified need to make rectifications within a time limit according to the Supplier Rectification Problem Letter, and are subject to continuous supervision throughout the rectification process to ensure the effectiveness of the supplier's rectification. For major risk events, including red lines such as fraud, violation of the Sunshine Agreement and use of raw materials with serious safety risks, a one-vote veto and immediate cancellation of cooperation will be implemented during the review, and the involved suppliers will be included in the supplier blacklist. During the reporting period, because some suppliers failed to comply with the contract signed by both parties, 7 suppliers were eliminated.



- **負責任採購**
Responsible Procurement

現代牧業將供應商環境及社會管理表現視為關鍵評審指標，在採購管理中，優先選擇環保供應商及產品，倡導供應商關注環境及社會風險管理。

The Company regards suppliers' environmental and social management performance as a key assessment indicator. In procurement management, we give priority to environmentally friendly suppliers and products, and advocate suppliers to pay attention to environmental and social risk management.

在環境方面，現代牧業在考察供應商廠房與設施時，現場查看生產設施，確保不對環境造成污染，對於產生煙塵量大的設備設置煙塵回收系統；要求具備獨立廠房，廠區周圍沒有影響飼料產品質量安全的污染源；廢棄物合規合法處理；對豆類產品進行農殘第三方檢測、監控是否合規使用農藥，並對不合規情況給予限期整改，避免因為過度使用農藥對土壤造成污染。

In terms of the environment, when inspecting the factories and facilities of the supplier, Modern Dairy checks the production facilities on site to ensure no pollution to the environment and sets up a dust recovery system for equipment that generates a large amount of smoke and dust; the supplier has an independent factory, and there are no pollution sources around the factory that affect the quality and safety of feed products; and the supplier disposes of waste in compliance with laws and regulations. We carry out third-party testing and monitoring of pesticide residues on soy products on whether to use pesticides in compliance, and provide time-limited rectification for non-compliance to avoid soil pollution due to excessive use of pesticides.

在社會方面，現代牧業針對供應商誠信經營資質等方面制定監管要求，並將供應商安全管理水平加入考量範圍，引進安全管理水平優質的供應商。與供應商簽訂安全協議，明確安全生產管理職責與要求；確保供應商按照要求為員工購買保險，確保證照、保險齊全；針對相關供應商開展危險源辨識及安全生產教育和培訓工作。

In terms of society, Modern Dairy has formulated regulatory requirements for suppliers' integrity management qualifications and other aspects, and has included the safety management level of suppliers into the scope of consideration, so as to introduce suppliers with high-quality safety management levels. We sign safety agreements with suppliers to clarify safety production management responsibilities and requirements, and ensure that suppliers purchase insurance for employees as required and certificates and insurance are complete, and carry out hazard identification and safety production education and training for relevant suppliers.

案例
Case study

一體化、數智化供應鏈管理平台
Integrated and digitalized supply chain management platform

現代牧業致力於開發數智採購平台，打造多生態服務，拉動全面增值的採購數智化方案，優化採購版塊流程，提升工作效率，加強供應鏈條採購管控。

Modern Dairy is committed to developing a digital intelligence procurement platform, creating multi-ecological services, promoting comprehensive value-added procurement digital intelligence solutions and optimizing the procurement process, thereby improving work efficiency and strengthening supply chain procurement management and control.

2022年，現代牧業聯合愛養牛，進行SAP招採系統和SRM系統對聯，精準連接需求端和供給端，實現數據實時連接共享，各流程公開透明，提高了信息的準確性和可信度，讓監督管理更便捷。同時，通過協同供應商管理系統，有效整合供應商渠道資源，科學設計採購方案，提升採購效率。

In 2022, Modern Dairy and Aiyangniu carried out the couplet of SAP recruitment system and SRM system, which accurately connected the demand side and the supply side and realized real-time data connection and sharing, so as to make each process open and transparent, improve the accuracy and credibility of information and make supervision and management more convenient. At the same time, by cooperating with the supplier management system, the supplier channel resources were effectively integrated, the procurement plan scientifically designed and the procurement efficiency improved.



表：2022年現代牧業供應商關鍵績效：
Table: Key Performances of Modern Dairy's Suppliers in 2022:

指標名稱 Indicators		指標單位 Unit	2022年 2022
供應商總數 ²² Total number of suppliers ²²		個 Supplier	629
貿易商供應商數 Number of trader suppliers		個 Supplier	377
廠家供應商數 Number of manufacturer suppliers		個 Supplier	252
按地區劃分的供應商數量 Number of suppliers by region	中國大陸地區 Mainland China	個 Supplier	616
	中國港澳台地區 Hong Kong, Macao and Taiwan of China	個 Supplier	0
	海外地區 Overseas	個 Supplier	13
向供應商執行有關慣例的數目 Number of suppliers implementing our practices		個 Supplier	629
供應商執行有關慣例的年度評價率 Annual evaluation rate of suppliers implementing our practices		%	100

²² 供應商總數：不包含物流供應商
Total number of suppliers: Logistics suppliers are not included

04



踐行共同富裕使命 |
Fulfilling the Mission of Common Prosperity

4. 踐行共同富裕使命

Fulfilling the Mission of Common Prosperity

本公司關注民生、承擔社會責任，積極回應員工所思所想，實現企業、員工與社會和諧共贏，創造發展的不竭動力。

The Company pays attention to people's livelihood, assumes social responsibilities, and actively responds to employees' concerns, so as to achieve a harmonious and win-win situation between the enterprise, employees and society and create an inexhaustible driving force for development.

4.1 謀福利的「養牛人」

Responsible "Cow Keeper"

現代牧業將員工視為持續發展的根基，以實際行動保障員工的一切合法權利，關注員工深層需求，提升員工歸屬感、向心力和凝聚力。

Modern Dairy regards employees as the foundation of sustainable development, protects all legal rights of employees with practical actions, and pays attention to the deep needs of employees to enhance employees' sense of belonging, centripetal force and cohesion.

- 員工權益保障

Protection of Employee Rights and Interests

公司遵循聯合國《世界人權宣言》及《國際人權公約》和國際勞工組織核心公約所闡述的所有國際公認的人權政策，堅持對不同國籍、民族、種族、性別、宗教信仰和文化背景的員工一視同仁，平等對待，堅決禁止僱傭和使用童工，尊重並保障所有員工的合法權益。

The Company follows all internationally recognized human rights policies stated in the United Nations Universal Declaration of Human Rights, the International Convention on Human Rights and the core conventions of the International Labor Organization, and persists in treating employees with different nationalities, ethnicities, races, genders, religious beliefs and cultural backgrounds equally, resolutely prohibits the employment and use of child labour, respects and protects the legitimate rights and interests of all employees.

本公司遵循國際勞工組織《准予就業最低年齡公約》、《強迫勞動公約》等有關保障員工合法權益的國際規範和準則，嚴格遵守《中華人民共和國勞動法》、《中華人民共和國勞動合同法》、《中華人民共和國就業促進法》、《中華人民共和國未成年人保護法》等相關法律法規，修訂《員工入職管理制度》、《招聘管理制度》、《勞動合同管理制度》、《退休返聘人員管理制度》、《現代牧業集團勞動合同書》內部制度，進一步規範入職管理與招聘制度，明確招聘的流程和標準，保證用工平等。公司通過全面實行勞動合同制度、推行集體協商和集體合同制度、健全協調勞動關係三方機制，保障員工基本權益。

The Company follows the international norms and guidelines for protecting the legitimate rights and interests of employees such as the Convention on the Minimum Age for Employment and the Forced Labour Convention of the International Labor Organization, and strictly abides by the Labor Law of the People's Republic of China, the Labor Contract Law of the People's Republic of China, the Employment Promotion Law of the People's Republic of China and the Minor Protection Law of the People's Republic of China and other relevant laws and regulations. The Company has revised internal systems such as the Employee Entry Management System, the Recruitment Management System, the Labor Contract Management System, the Retired Rehired Personnel Management System, the Modern Dairy Group Labor Contract to further standardize the entry management and recruitment system, clarify the flow and standards of recruitment and ensure equal employment. The Company protects the basic rights and interests of employees by fully implementing the labour contract system, implementing the collective negotiation and collective contract system and improving the tripartite mechanism for coordinating labour relations.

平等僱傭

Equal employment

- 公司公開發布平等就業聲明，堅持男女平等、同工同酬。構建多元化的人力資源，公平對待不同國籍、種族、年齡和文化背景的員工，積極為員工營造和諧、包容、平等、關愛的組織氛圍。

The Company publicly issued a statement on equal employment, insisting on equality between men and women and equal pay for equal work. We build diversified human resources, treat employees of different nationalities, races, ages and cultural backgrounds fairly, and actively create a harmonious, inclusive, equal and caring organizational atmosphere for employees.

- 報告期內，本公司勞動合同簽訂率100%，皆為直接僱傭形式，且未發生與上述描述相關的違反人權的投訴事件。截至報告期末，本公司共有員工8,455人，無兼職員工，女性員工佔比32.7%，女性員工在管理職級中佔比23.7%。

During the reporting period, the labour contract signing rate of the Company was 100%, all of which were direct employment, and there were no complaints of human rights violations related to the above description. As at the end of the reporting period, the Company had a total of 8,455 employees and no part-time employees, 32.7% of which were female. Female employees held 23.7% of management positions.



<p>杜絕童工及強制勞工 Elimination of child labour and forced labour</p>	<ul style="list-style-type: none"> - 公司對任何形式的強制勞工和童工持零容忍態度。本公司依法合規審理員工入職資質，杜絕聘用童工、強迫勞動等一切可能非法的用工行為。設有員工熱線等舉報申訴途徑，鼓勵員工及時舉報違規用工行為。若發現違規情況，將會積極採取處理行動，保障公司用人體系平穩運行。報告期內，本公司未發生使用童工及強迫勞工等違規情況。 The Company has zero tolerance for forced and child labour in any form. The Company reviews the entry qualifications of employees in compliance with laws and regulations, and eliminates all possible illegal employment practices such as child labour and forced labour. We have hotlines and other reporting and grievance channels to encourage employees to report violations of employment practices in a timely manner. If violations are found, we will actively take action to ensure the smooth operation of the Company's talent system. During the reporting period, the Company did not have any violations such as the use of child labour and forced labour.
<p>人權保障 Guarantee of human rights</p>	<ul style="list-style-type: none"> - 公司尊重人權，禁止歧視、虐待或非人道待遇，禁止限制員工人身自由，合理合法地保護員工權益。定期開展針對全體員工的人權相關政策和制度的宣貫，增強員工人權意識，有效落實人權保障，防止侵權行為的發生。 The Company respects human rights, prohibits discrimination, abuse or inhumane treatment, prohibits restricting the personal freedom of employees, and protects the rights and interests of employees reasonably and legally. The Company regularly carries out publicity and implementation of human rights-related policies and systems for all employees, enhances employees' human rights awareness, effectively implements human rights protection, and prevents the occurrence of rights violations. - 公司持續對人權政策進行有效性監控和更新，在遵循國家及地方法律法規的前提下，充分聽取各方意見，將企業文化價值觀、法律法規變化及業務需求融入制度，全面梳理出台了12份集團人力資源類制度。 The Company continuously monitors and updates the effectiveness of the human rights policy. Under the premise of complying with national and local laws and regulations, we fully listen to opinions from all parties, and have integrated corporate culture values, changes in laws and regulations and business needs into the system, and comprehensively sorted out and issued 12 group human resources systems.

休假權益

Leave entitlement

- 不斷完善生產經營任務與保證員工休息、休假的平衡機制，鼓勵員工實現最佳績效產出的同時，充分尊重員工的休息權利，結合公司生產作業特點，合理安排職工工作時間，認真執行國家規定的法定休假日、婚喪假、產假、探親假、年休假等帶薪假期制度。

We constantly improve the balance mechanism between production and operation tasks and ensuring employees' rest and vacation. While encouraging employees to achieve the best performance output, we fully respect employees' right to rest. According to the characteristics of the Company's production operations, we reasonably arrange the working hours of employees, and conscientiously implement the paid holiday system stipulated by the government such as statutory holidays, wedding and funeral leaves, maternity leave, family visit leave and annual leave.

- 落實獨生子女護理假，將探親假的相關條款升級為團圓假，為異地員工提供每季度一次回家探親團圓並報銷路費的機會，通過點滴關愛，讓廣大員工獲得更好的幸福感。

Implement the one-child nursing leave, upgrade the relevant terms of family visits to reunion leave, to provide employees in different places with the opportunity to go home to visit relatives and reunite once a quarter and reimburse travel expenses, and through a little care, employees can get a better sense of happiness.



表：2022年現代牧業員工關鍵績效
Table: Key Employee Performances of Modern Dairy in 2022

指標名稱 Indicators		指標單位 Unit	2022年 2022
按性別劃分員工數量及比例 Number and percentage of employees by gender	男性 Male	人 Person	5,692
		%	67.32
	女性 Female	人 Person	2,763
		%	32.68
按年齡組別劃分的員工數量及比例 Number and percentage of employees by age group	30歲以下 30 years old and below	人 Person	1,651
		%	19.53
	31-40歲 31-40 years old	人 Person	2,804
		%	33.16
	41-50歲 41-50 years old	人 Person	2,714
		%	32.1
	51歲以上 51 years old and above	人 Person	1,286
		%	15.21
按僱傭類型劃分的員工數量及比例 Number and percentage of employees by employment type	管理崗位 Management positions	人 Person	704
		%	8.33
	行政崗位 Administrative positions	人 Person	864
		%	10.22
	事業技術崗位 Professional and technical positions	人 Person	2,274
		%	26.90
	生產崗位 Production positions	人 Person	4,071
		%	48.15
	其他崗位 Other positions	人 Person	542
		%	6.41

指標名稱 Indicators		指標單位 Unit	2022年 2022
按地區劃分的員工人數及比例 Number and percentage of employees by region	安徽省 Anhui	人 Person	1,508
		%	17.84
	北京市 Beijing	人 Person	58
		%	0.69
	海南省 Hainan	人 Person	15
		%	0.18
	河北省 Hebei	人 Person	2,605
		%	30.81
	河南省 Henan	人 Person	12
		%	0.14
	黑龍江省 Heilongjiang	人 Person	626
		%	7.40
	湖北省 Hubei	人 Person	4
		%	0.05
	江蘇省 Jiangsu	人 Person	205
		%	2.42
	遼寧省 Liaoning	人 Person	15
		%	0.18
	內蒙古 Inner Mongolia	人 Person	1,500
		%	17.74
	寧夏 Ningxia	人 Person	217
		%	2.57
	山東省 Shandong	人 Person	798
		%	9.44



指標名稱 Indicators	指標單位 Unit	2022年 2022
山西省 Shanxi	人 Person	184
陝西省 Shaanxi	% Person	2.18 392
四川省 Sichuan	% Person	4.64 193
西藏 Tibet	% Person	2.28 5
香港 Hong Kong	% Person	0.06 3
新疆 Xinjiang	% Person	0.04 36
雲南省 Yunnan	% Person	0.43 79
	%	0.93

- 員工薪酬福利**
Employee Salary and Benefits

本公司持續提升員工的幸福感與滿意度，形成了多維度、多渠道、普惠性與適度差異性相結合的福利關愛體系。目前，公司員工福利達20餘項，其中法定福利項目佔10%，子女投保商業補充保險、意外醫療及大病醫療保障、困難員工補助等非法定福利項目佔90%。

The Company continues to improve the happiness and satisfaction of employees, and has formed a multi-dimensional, multi-channel, inclusive and moderately differentiated welfare care system. At present, the Company has more than 20 employee benefits in place, of which statutory welfare items account for 10%, and non-statutory welfare items such as children's insured commercial supplementary insurance, accidental medical care and serious illness medical insurance and subsidies for difficult employees account for 90%.

<p>薪酬激勵 Salary incentives</p>	<ul style="list-style-type: none"> - 努力推動員工共富，高度尊重員工的勞動，提供有競爭力的薪酬。每年公司將結合經營情況和市場情況實施差異化漲薪。 Efforts are made to promote the common prosperity of employees, highly respect the labour of employees, and provide competitive salaries. Every year, the Company will carry out differentiated salary increases based on operating conditions and market conditions. - 公司建立以業績目標為導向，以過程控制為重點的績效考核制度。組織績效等級主要應用於部門內部個人績效等級分佈佔比及獎金總包提取、年度評優、年度調薪總包等；個人績效等級主要應用於個人激勵分配、晉升、調薪、評優、調崗／降級／淘汰等。 The Company has established a performance appraisal system that is guided by performance goals and focuses on process control. Organizational performance ratings are mainly used in the distribution of individual performance ratings within the department and the extraction of bonus packages, annual appraisals, annual salary adjustment packages, etc., while personal performance ratings are mainly used in personal incentive distribution, promotion, salary adjustment, evaluation, transfer/demotion/elimination, etc.
<p>基本保障福利 Basic security and benefits</p>	<ul style="list-style-type: none"> - 公司依照國家及地方人社局規定為員工辦理五險一金，保障員工基本權益，此外，還為員工提供了大額醫療保險、女工衛生費、季度勞保福利、防暑降溫福利等。 The Company purchases five social insurance and one housing fund for employees in accordance with the regulations of the national and local human resources and social security bureaus to protect the basic rights and interests of employees. In addition, it also provides employees with large-amount medical insurance, sanitary expenses for female workers, quarterly labour insurance benefits and benefits for heatstroke prevention and cooling.



<p>員工健康福利 Employee health benefits</p>	<p>– 公司重視每位員工的健康保障，為全體員工提供補充商業保險。同時，公司不斷提升核心福利，落地內部健康計劃，為全體員工提供健康體檢，並將體檢標準提高至500元／人。此外，公司關注員工家人的健康，將福利惠及家庭，提供員工子女補充商業保險。</p> <p>The Company attaches great importance to the health protection of each employee and provides supplementary commercial insurance for all employees. The Company also continues to improve core benefits by implementing internal health plans, providing health checkups for all employees and increasing the standard fee for medical checkups to RMB500 per person. In addition, the Company pays attention to the health of employees' families by providing supplementary commercial insurance for employees' children.</p>
<p>節日慰問福利 Festival benefits</p>	<p>– 公司員工提供節日慰問福利、生日禮金、婚禮賀金等，多方位提高員工幸福感與企業文化認同感。</p> <p>The Company provides employees with holiday benefits, birthday gifts, wedding gifts, etc., to improve employees' happiness and corporate culture identity in multiple ways.</p>
<p>生活津貼福利 Living allowances and benefits</p>	<p>– 公司為員工提供包括工作餐補、工作用車補貼、電話補貼、異地輪崗津貼、帶薪年假補貼、牧場一線雙職工住房補貼等在內的一系列津貼福利，為員工提供多重福利與保障，提升企業吸引與留任人才的能力。</p> <p>The Company provides employees with a series of allowances and benefits including work meal allowance, work car allowance, telephone allowance, off-site rotation allowance, paid annual leave allowance and housing allowance for front-line dual-employee families on the farm, etc. to enhance the Company's ability to attract and retain talents.</p>



- **安全生產**
Safe Production

本公司高度重視生產安全，樹牢安全發展理念，積極建立安全生產管理體系，嚴格落實安全整治各項責任措施，堅守安全生產底線。公司嚴格遵守《中華人民共和國安全生產法》、《中華人民共和國職業病防治法》、《生產安全事故報告和調查處理條例》、《中華人民共和國職業病防治法》、《中華人民共和國國家職業衛生標準》等國家法律法規，制定《安全生產管理制度》、《健康安全環保事故調查與管理制度》、《健康安全環保飛行檢查評價管理制度》、《個體防護管理實施方案》、《安全三級教育實施落地方案》等制度，並對相關政策及制度進行每年一次的內部審計，確保相關制度政策落地，保證安全生產運營。

The Company attaches great importance to production safety by establishing the concept of safety development, actively setting up a safety production management system, strictly implementing various responsibility measures for safety rectification and sticking to the bottom line of safety production. The Company strictly abides by the Safety Production Law of the People's Republic of China, the Law of the People's Republic of China on the Prevention and Control of Occupational Diseases, the Regulations on the Reporting, Investigation and Handling of Production Safety Accidents, the Law of the People's Republic of China on the Prevention and Control of Occupational Diseases, the National Occupational Health Standards of the People's Republic of China and other national laws and regulations, and formulated the Safety Production Management System, the Health, Safety and Environment Protection Accident Investigation and Management System, the Health, Safety and Environment Protection Unannounced Inspection and Evaluation Management System, the Personal Protection Management Implementation Scheme, the Safety Three-Level Education Implementation Scheme and other systems. We conduct an annual internal audit on relevant policies and systems to ensure the implementation of relevant systems and policies and safe production and operation.

安全生產目標：

Safety Production Goal:

本公司貫徹執行「安全第一、預防為主」的安全生產方針，基於集團「雙戰略」模式，全面升級一流的安全質量體系。以「雙降一零」即「百萬工時傷害率下降、職業病發病率下降、重大安全生產事件為0」為核心目標，建立集團層面的安全行動計劃。

The Company implements the safe production policy of "safety and prevention come first", and comprehensively upgrades the first-class safety and quality system based on the Group's "dual strategy" model. With the core goal of "the decrease in the injury rate per million working hours and the incidence of occupational diseases with zero death in the major production events", we have established a safety action plan at the group level.



安全責任管理：

Safety Management Responsibility:

成立安全生產委員會，負責統籌規劃和指導安全生產工作，定期組織召開安全生產會議，研判安全生產形勢，決策集團安全生產工作方向，制定安全目標和總體實施方案，形成安全生產的長效機制。

The Company, having established a safety production committee responsible for overall planning and guidance of safety production work, regularly organizes safety production meetings, studies and judges the safety production situation, makes decisions on the group's work safety work direction, formulates safety goals and overall implementation plans, and forms a long-term mechanism for safety production.

安全績效管理機制與監督：

Safety Performance Management Mechanism and Monitoring:

集團建立了健康安全績效管理機制，與集團高管、牧場各層級管理者等相關人員均簽訂了績效合同。績效合同中針對健康安全結果指標設定了與個人薪酬掛鈎的考評條款。

The Group has established a health and safety performance management mechanism, and signed performance contracts with relevant personnel such as group executives and farm managers at all levels. In the performance contracts, the evaluation clauses linked to personal salary were set for the health and safety result indicators.

從上至下開展形式多樣的內部檢查工作，包括「四不兩直」高管暗訪(不發通知、不打招呼、不聽匯報、不用陪同接待、直奔基層、直插現場)、集團飛行檢查、大區互查、牧場自查等方式，以及總經理「一把手踐行安全」等多項活動。

The Company carried out various forms of internal inspections from the top down, including the "Four Nos and Two Straights" unannounced visits (no issue of notice, no greeting, no reporting, no accompanied reception, going straight to frontlines, going straight to sites), inspections conducted by executives, regional mutual inspections, self-inspections of farms and other measures such as the general managers applying the safety policies in person.

同時，公司還將安全管理理念和原則推行至供應鏈管理，鼓勵和指導供應商培養安全意識、關注安全生產、建立安全體系，保障供應鏈上下游的安全運營。

At the same time, the Company also promotes safety management concepts and principles to supply chain management, encourages and guides suppliers to cultivate safety awareness, pay attention to production safety, establish safety system, and ensure safe operation of the upstream and downstream of the supply chain.

<p>完善管理機制 Perfecting management mechanism</p>	<p>– 日常組織開展安全生產管理績效考核與評價，驗證管理體系運行情況，督促風險分級管控和隱患排查治理雙重預防工作機制建設，推動安全生產的重大風險管控與治理。 Routinely organize and carry out safety production management performance assessment and evaluation, verify the operation of the management system, and supervise the construction of a dual prevention working mechanism for risk management and control and hidden danger investigation and treatment, so as to promote the management, control and governance of major risks in safety production.</p>
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<p>控制安全風險 Controlling security risks</p>	<ul style="list-style-type: none"> - 嚴格落實「三管三必須」的安全生產法規政策，落實全員的安全生產責任制、安全風險分級管控和隱患排查治理雙重預防機制。將安全准入核查體系納入工程管理平台統一管理，明確項目開工前的標準審核程序，嚴格把關安全技術資料，從源頭防控安全風險。持續加強安全生產標準化建設，新項目規範操作，同時為員工提供防護器具，並提供定期維護和更換，全面保障人身安全。 <p>Strictly enforce the safety production regulations and policies of the “three musts for three managements (i.e. safety must be guaranteed in management of industry, management of operation and management of production)”, and implement the safety production responsibility system for all employees, the safety risk management and control, and the double prevention mechanism of hidden danger investigation and governance. Incorporate the safety access verification system into the unified management of the project management platform, clarify the standard review procedures before the start of the project, and strictly control the safety technical data, so as to prevent and control safety risks from the source. Continue to strengthen the standardized construction of safety production, standardize the operation of new projects, and provide employees with protective equipment, and offer regular maintenance and replacement to fully protect personal safety.</p>
<p>加強安全教育 Strengthening safety education</p>	<ul style="list-style-type: none"> - 為提高員工安全意識，增強員工安全技能，公司開展全員安全知識培訓並開設線上自學平台和專欄，內容涵蓋相關政策、專項工作、安環文化、安環技術的講解，針對不同專業、不同安全風險源具體分析。培訓後組織考試驗證各牧場培訓效果，全面夯實員工安全知識。 <p>In order to improve employees' safety awareness and enhance employees' safety skills, the Company conducts safety knowledge training for all employees and sets up an online self-study platform and column, which cover relevant policies, special work, safety and environmental protection culture and safety and environmental protection technology, and make specific analysis for different majors and different safety risk sources. After the training, an exam will be organized to verify the training effect of each farm to comprehensively consolidate the safety knowledge of employees.</p>

保障施工安全
Guaranteeing
construction safety

- 標準化管理新建施工項目，明確要求安全文明施工，並在項目合同中納入安全文明施工協議，要求100%簽署率。
Standardize the management of new construction projects, clearly request safe and civilized construction, and include safe and civilized construction agreements in project contracts, requesting a signing rate of 100%.
- 建立安全文明施工領導小組並配置專業的安全員，全員協作，實行安全文明生產責任制。
Establish a safe and civilized construction leading group and assign professional safety officers to cooperate with all staff to implement a safe and civilized production responsibility system.
- 實際操作中重點控制高空作業(全程安全帶)、基坑作業(圍欄防護、人車分離)、用電作業；防範機械傷害，嚴格執行機械設備使用前的調試、檢測，落實操作人員持證上崗，保證機械設備按時進行維修保養；易燃易爆物品分區管理，並設置專人保管；建立消防責任制，成立消防小組，全員進行崗前培訓；設置消防管道，定期檢查滅火器壓力，懸掛安全防火標識，強化人員消防意識；施工單位進行施工時，要求嚴格採取有效的安全防護措施。
During the operation, focus on controlling high-altitude operations (wearing safety belts throughout the process), foundation pit operations (fence protection and separation of people and vehicles) and electrical operations. To prevent mechanical injuries, strictly implement the debugging and testing of mechanical equipment before use and ensure that operators hold certificates to work and mechanical equipment is repaired and maintained on time. Inflammable and explosive materials are managed in different areas with assigning special personnel for storage, and a fire protection responsibility system is established with setting up the fire protection team, and all staff undergo pre-job training. Set up fire-fighting pipelines, regularly check the pressure of fire extinguishers, hang safety and fire-proof signs and strengthen personnel's fire-fighting awareness. The construction unit is required to strictly adopt effective safety protection measures in conducting construction.



承包商安全管理考核
Safety management
assessment of contractors

公司強化對承包商的安全施工管理監督，制定施工違約考核細則，從危險區域施工預控措施、施工設備的搭建和使用、建立防火設施、設立施工現場安全標識和圍欄的等細節出發，落實安全項目執行情況的全面檢查，有效減少承包商的安全生產違法違規行為，堅決杜絕因承包商安全管理不到位而引發各類生產安全事故。

The Company strengthened the safety construction management and supervision of contractors, and formulated detailed rules for the assessment of construction breaches. Starting from the details such as construction pre-control measures in dangerous areas, construction and use of construction equipment, the establishment of fire prevention facilities and establishment of construction site safety signs and fences, we implement a comprehensive inspection of the implementation of safety projects, to effectively reduce contractors' violations of laws and regulations in production safety and resolutely prevent various production safety accidents caused by contractors' inadequate safety management.



基礎設施可視化
Infrastructure Visualization



安全教育、安全早會
Safety Education and
Safety Morning Meeting



安全培訓
Safety Training

- 職業健康
Occupational Health

公司秉承「以人為本」作為管理方針，結合ISO 45001、國家安全生產標準化和雙重預防機制要求，建立並持續完善職業健康安全管理體系(OHS)。公司各牧場建立並持續完善ISO 45001職業健康安全管理體系，並致力於在各牧場間獲得更廣泛的認證。已有27家法人單位順利通過ISO 45001職業健康安全管理體系認證，各體系在各單位內持續穩定推進運行，並在2022年通過了監督審核。

Adhering to the “people-oriented” management policy, the Company established and continued to improve the occupational health and safety management system (OHS) in accordance with ISO45001, national safety production standardization and dual prevention mechanism requirements. The Company’s farms have established and constantly improve the ISO 45001 Occupational Health And Safety Management System, and are committed to obtaining more extensive certification for the farms. There were 27 legal entities that successfully passed the ISO 45001 Occupational Health and Safety Management System Certification, with each system continuing to run steadily in each unit, and such farms also passed the supervision and audit in 2022.



公司在《中華人民共和國職業病防治法》的指引下，制定《職業健康檢查、診斷與鑒定管理制度》等內部管理制度，定期組織員工體檢，對職業病採取早發現、早防範。報告期內，職業病體檢覆蓋率為100%，補充醫療保險覆蓋率為100%，補充商業保險覆蓋率為100%。2022年度，本公司未發生健康與安全相關的投訴事件、未發生火災事故、防疫事故及勞資糾紛事件。

Under the guidance of the Law of the People's Republic of China on the Prevention and Control of Occupational Diseases, the Company has formulated internal management systems such as the Occupational Health Examination, Diagnosis and Appraisal Management System, and regularly organizes employee physical examinations to take early detection and prevention of occupational diseases. During the reporting period, the coverage rate of occupational disease medical examination, supplementary medical insurance and supplementary commercial insurance was 100%. In 2022, the Company had no complaints related to health and safety, no fire accidents and epidemic prevention accidents, and labour disputes.

<p>風險評估，分級管理 Risk assessment and hierarchical management</p>	<p>— 各單位編製《環境因素和危險源管控制度》，對現場作業過程中的職業健康安全風險和危害進行評估，通過評估結果確定工作場所中可能造成危害的因素。 Each unit compiles the Environmental Factors and Hazardous Source Control System to assess the occupational health and safety risks and hazards during on-site operations and determine the factors that may cause hazards in the workplace through the assessment results.</p>
<p>制定目標，量化績效 Goal setting and performance quantification</p>	<p>— 支持集團層面的健康和安全管理目標的計劃，將行動計劃與量化目標進行優先排序和整合，以有效應對風險。 Support group-level planning of health and safety targets, prioritizing and integrating action plans with quantified targets to effectively address risks.</p>



<p>應急預案，有效處置 Emergency plan and effective disposal</p>	<ul style="list-style-type: none"> - 各單位編製生產經營單位生產安全事故應急預案，並根據工程施工屬地政府的要求，進行登記備案。 Each unit prepares the production safety accident emergency plan of the production and operation unit, and registers and records according to the requirements of the government where the project is located. - 由牧場總經理牽頭定期組織應急演練，做好各項應急物資儲備並做好日常維護。 The general manager of the farm organizes regular emergency drills, stores various emergency supplies and performs daily maintenance. - 定期組織員工開展賦能培訓，提升員工在面對突發事件時的應急處置能力，並提升員工安全意識。 Regularly organize employees to carry out empowerment training to improve employees' emergency response capabilities in the face of emergencies and safety awareness.
<p>定期審核，及時整改 Regular review and timely rectification</p>	<ul style="list-style-type: none"> - 對於內部檢查中發現的安全隱患及時整改。對健康安全目標進展情況進行持續跟蹤，及時督促進展緩慢的單位，加強實踐中的問題溝通並給予必要的支持和培訓。 The potential safety hazards found in the internal inspection shall be rectified in a timely manner. Continuously track the progress of health and safety goals, timely supervise units that are slow to progress, strengthen communication on problems in practice, and provide necessary support and training.
<p>普遍推廣，廣泛採信 Promotion and acceptance</p>	<ul style="list-style-type: none"> - 集團統一編製健康安全環保管理協議模板，將建設健康安全管理体系納入與供應商的合作條件。 The Group uniformly compiles the agreement template for health, safety and environmental protection management, and incorporates the health and safety management system construction into the conditions of cooperation with suppliers.



2022年，現代牧業健康與安全關鍵績效
Health and Safety Key Performances of Modern Dairy in 2022

指標名稱 Indicators	指標單位 Unit	2022年 2022	2021年 2021	2020年 2020
因工亡故人數 Work-related fatalities	人 Person	0	1	0
比率 Percentage	%	0	0.02	0

指標名稱 Indicators	指標單位 Unit	2022年 2022
因工傷損失工作日數 Days lost due to work-related injuries	天 Days	777

4.2 謀進取的「養牛人」 Ambitious “Cow Keeper”

現代牧業立足企業發展戰略需要，緊扣企業核心業務和市場開拓方向，創新實施人才計劃，建立健全人才考核激勵機制，提供關鍵人才與公司共同成長的職業經歷，創造雙贏局面。

Based on the strategic needs of its development and by closely following its core business and market development direction, Modern Dairy innovates and implements its talent plans, aiming to establish and improve the talent assessment and incentive mechanism, provide key talents with the professional experience of growing with the Company and create a win-win situation.

- 人才培養
Talent Cultivating

現代牧業基於戰略規劃和業務發展需求，秉持着培養公司領軍型管理人才和精英型專才的原則，以建設一流的牧業人才供應鏈體系為目標，實現人才驅動戰略的理念，進一步推進人才加速發展的戰略落地。

Based on strategic planning and business development needs, by adhering to the principle of cultivating the Company's leading management talents and elite professionals and aiming at building first-class animal husbandry talent supply chain systems, the Company strives to realize the concept of “talent driving strategy” and further promote the implementation of the strategy of “talents accelerating development”.

公司引進光輝國際和SHL兩家國際權威測評公司，以「兩個通道，一個基礎」為內部人才發展的體系核心，建立雙通道人才發展機制，助力員工確定自身的職業定位及未來發展路徑。

The Company introduced Korn Ferry International and SHL, two international authoritative evaluation companies, and with “two channels, one foundation” as the core of the internal talent development system, and it established a dual-channel talent development mechanism to help employees determine their career orientation and future development path.

開展人才盤點，識別人才優勢和缺口

Conducting talent reviews to identify talent strengths and gaps

公司以《人才發展與培養管理制度》、《幹部輪崗管理制度》等人才管理制度為基礎，同步啟動了公司人才盤點，通過對於集團員工的評鑒、分析，確定內部人才優勢和缺口，為針對性地制定培訓措施提供參考，確保集團人才工作的專業高效和長期運行。

The Company launched the talent review based on the Talent Development and Training Management System and the Cadre Rotation Management System and other talent management systems, and through the evaluation and analysis of the Group's employees, it will determine the advantages and gaps of internal talents, and provide a reference for formulating targeted training measures to ensure the professional, efficient and long-term operation of the Group's talent work.



開發領導力模型，做強領導梯隊硬實力

Developing a leadership model to enhance the hard power of the leaders team

集團高管團隊傾力支持、核心管理團隊全力參與，通過開展領導力模型共創工作坊，藉鑒國際領先方法論，結合中國牧業特點，成功發布牧業首個以「勇突破、拓視野、強團隊、重落地」為關鍵因素的「四驅」領導力模型，為集團領導力梯隊的建設打下了堅實的基礎。

The Group's senior management team provides full support with the core management team offering full participation. By carrying out the leadership model co-creation workshops, drawing on internationally leading methodologies and based on the characteristics of China's animal husbandry, we successfully released the animal husbandry's first "four-wheel" leadership model with "seeking breakthroughs, broadening horizons, strengthening team spirits and emphasizing enforcement" as the key factors, laying a solid foundation for the construction of the Group's leadership echelon.

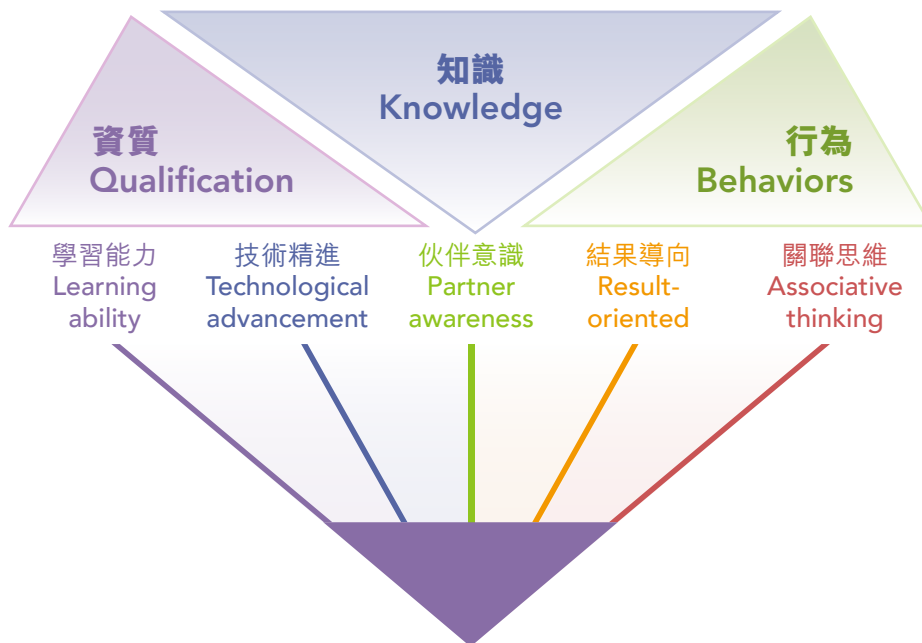


開創任職資格雙通道，夯實技術核心競爭力

Creating dual channels for job qualifications and consolidating core technical competitiveness

通過開展專業力模型開發設計專項工作，創造牧業首個「鑽石」專業力模型，開創牧業技術人才學習、發展、晉升的廣闊通道，成功發布牧業首個技術勝任力模型。在《任職資格管理制度》的標準下，啓動集團專業人才任職資格認證，全集團數百名專業技術人才獲得晉升，切實實現牧業專業人才的可視化管理，保證了集團專業技術型人才的發展、進步。

Through the development and design of professional force models, we have created the first “diamond-shaped” professional force model in animal husbandry, creating a broad channel for animal husbandry technical talents to learn, develop and get a promotion, and successfully released the first technical competency model in the animal husbandry. Based on the standards of the Qualification Management System, we have launched the qualification certification of professional talents of the Group. Hundreds of professional and technical talents in the whole group have been promoted, effectively realizing the visual management of animal husbandry professionals and ensuring the development and progress of the Group’s professional and technical talents.



現代牧業以「讓牛人綻放」的企業文化價值觀為主旨，搭建了包含22類人才項目員工培訓體系，覆蓋包括領導力梯隊、專業力隊伍、全員通用力、管培生青苗計劃、新員工培訓等多個員工培訓子體系，涵蓋了針對員工知識、技能、領導力等才能的全面培訓資源，面向全體員工開放，達到培訓覆蓋率100%。同時根據不同業務場景、員工工齡、專業水平的不同制定了各類主題專班，崗管理者的犇騰專班、後備管理者的源泉專班、技術隊伍的技術100專班，匹配內訓師100專項工作。此外，為員工提供帶薪外派培訓，參加國家奶牛產業技術體系公開課以及行業探討會等，確保全體員工均可獲得豐富的的學習資源和發展機會，加速促進牛人綻放。

With the corporate culture value of "unleash our potentials", Modern Dairy has established a staff training system that consists of 22 types of talent projects. These plans include multiple employee training subsystems such as leadership echelon, professionalism team, general forces for all employees, the "Young Talent Programme" for the management trainees and new employee training, covering comprehensive training resources for employees' knowledge, skills, leadership and other capabilities, and they are open to all employees, reaching a training coverage rate of 100%. We have also formulated various special classes according to different business scenarios, employees' length of service and professionalism, such as the "Benteng Special Class (犇騰專班)" for managers, the "Yuanquan Special Class (源泉專班)" for backup managers, the "Technical 100 Special Class (技術100專班)" for technical teams and the "100 Special Work (100專項工作)" for internal trainers. In addition, we provide employees with paid outbound training, such as participating in the national dairy industry technology system open class and industry seminars, to ensure that all employees can obtain abundant learning resources and development opportunities and accelerate the release of their potential.

青苗計劃

"Young Talent Programme"

現代牧業組建管培生青苗計劃，培訓內容包括現代牧業企業文化、企業制度應知應會、團隊熔煉、職業生涯規劃等內容，增強對於現代牧業的文化認同感和組織歸屬感，同時從職業能力、管理能力、學習能力等多維度進行提升，培養現代牧業未來管理、技術隊伍的後備人才。

Modern Dairy established the "Young Talent Programme" for the management trainees. The training content included the corporate culture of Modern Dairy, basic concepts of corporate systems, team building, career planning, etc. to enhance the sense of cultural identity and organizational belonging to Modern Dairy while improving professional ability, management ability, learning ability and other abilities, thus cultivating the reserve talents of Modern Dairy's future management and technical teams.



2022年現代牧業在培訓與發展關鍵績效
Modern Dairy's Key Performance in Training and Development in 2022

指標名稱 Indicator		單位 Unit	2022年 2022
培訓經費支出金額 Amount of training expenses		萬元人民幣 RMB0'000	450.1
培訓總場次 Total number of training sessions		次 Piece	3,004
培訓總人次 Total number of trainees		人次 Person-time	138,907
培訓總時數 Total number of training hours		小時 Hour	75,012.00
按培訓類別劃分的培訓時數 Training hours by training category	專業培訓 Professional training	小時 Hour	48,395.00
	管理培訓 Management training	小時 Hour	8,870.00
	其他培訓 Other training	小時 Hour	17,747.00
按性別劃分的受訓員工百分比 Percentage of trainees by gender	男性 Male	%	100
	女性 Female	%	100
按職級劃分的受訓員工百分比 Percentage of trainees by rank	初級員工 Junior employee	%	100
	中級管理層 Mid-level management	%	100
	高級管理層 Senior management	%	100



指標名稱 Indicator		單位 Unit	2022年 2022
按性別劃分的員工受訓平均時數 Average training hours of employees by gender	男性員工 Male	小時／人 Hour/person	16.6
	女性員工 Female	小時／人 Hour/person	15.5
按職級劃分的員工受訓平均時數 Average training hours of employees by rank	初級員工 Junior employee	小時／人 Hour/person	15.9
	中級管理層 Mid-level management	小時／人 Hour/person	21.5
	高級管理層 Senior management	小時／人 Hour/person	24.5
	24歲及以下員工 Employees aged 24 and below	小時／人 Hour/person	18.7
按年齡劃分的員工受訓平均時數 Average training hours of employees by age	25歲-44歲員工 Employees aged 25 to 44	小時／人 Hour/person	21.2
	45歲及以上員工 Employees aged 45 and above	小時／人 Hour/person	14.5

指標名稱 Indicator		單位 Unit	2022年 2022
按文化背景類別劃分的員工受訓 平均時數	學士學位以下	小時／人	15.9
Average training hours of employees by cultural background	Below the bachelor's degree	Hour/person	
	學士學位	小時／人	19.7
	Bachelor's degree	Hour/person	
	碩士及以上	小時／人	23.5
	Master's degree and above	Hour/person	

- ### 人才晉升與保留 Talent Promotion and Retention

現代牧業打造公平、公正的晉升機制，以「激活組織、成就牛人、價值倍增」為使命，依托公司的全面績效與激勵體系，建立了人才管理體系。2022年，企業的凝聚力、人吸引力和保留力明顯提升，人員流失率下降幅度達到18%，員工滿編率達到95%以上。

Modern Dairy has created a fair and just promotion mechanism, with the mission of "activating the organization, nourishing outstanding talents and multiplying value" and by relying on the Company's comprehensive performance and incentive system, it has established its own talent management system. In 2022, the Company's cohesion, talent attraction and retention were significantly improved, and the turnover rate was reduced by 18% while the full occupation rate was over 95%.



<p>晉升機制 Promotion mechanism</p>	<ul style="list-style-type: none"> - 設置領導力、專業力兩大體系。其中專業力體系包含獸醫、繁育、營養、設備四個系列，通過優化職級管理體系，建設任職資格體系，進一步拓展員工在公司內的職業發展渠道，持續改進員工激勵和晉升機制。 Set up two systems of leadership and professional force. The professional force system consists of four series, i.e., veterinary medicine, breeding, nutrition and equipment. By optimizing the rank management system and building the qualification system, we will further expand the career development channels of employees in the Company and continue to improve the employee incentive and promotion mechanism.
<p>員工績效考核 Employees' performance appraisal</p>	<ul style="list-style-type: none"> - 通過績效評價實現對組織和員工的全面分析考量。設置組織績效等級和個人績效等級，以業績達成的結果為衡量組織／個人績效等級的標準，同時將組織績效的達成與個人績效等級相關聯，樹立共贏的意識，從而提升團隊協同和戰鬥力。 Conduct a comprehensive analysis and consideration of the organization and employees through performance evaluation. Set the organizational performance level and individual performance level, take the achievement of performance as the standard to measure the organizational/individual performance level, and at the same time associate the achievement of organizational performance with the individual performance level to establish a sense of a win-win situation, thereby enhancing team coordination and combat effectiveness. - 關注員工過程績效，通過與員工的有效溝通和互動，激發員工覺察力、責任感和信心，實現以輔導改善行為、用行為影響績效的閉環管理，幫助員工提升績效水平及職業發展能力。2022年全面開展績效輔導，進行了500餘場績效輔導，聚焦短板推動業務提升。 Pay attention to the process performance of employees. Effective communication and interaction with employees can stimulate their awareness, sense of responsibility and confidence, so as to realize the closed-loop management of "improving behavior with coaching and influencing performance with behavior" and help employees improve their performance level and career development ability. In 2022, we carried out performance coaching in an all-round way with more than 500 performance coaching sessions, and focused on shortcomings to promote business improvement.



<p>關鍵人才儲備 Key talent pool</p>	<ul style="list-style-type: none"> - 建立關鍵崗位人才儲備庫，有序開展各序列各部門人才盤點及儲備工作，根據企業戰略發展規劃、業務需求、崗位特點，設立崗位專業經驗、績效等關鍵任職資格標準，打通任職資格評價、培養、發展的通道。 The Company has established a talent reserve pool for key positions, carried out the inventory and reserve of talents in each sequence and department in an orderly manner, and set up key qualification standards such as professional experience and performance for the position according to the Company's strategic development plan, business needs and job characteristics, so as to open up channels for job qualification evaluation, training, and development. - 建立關鍵崗位人才關懷機制，通過月度或季度的溝通會及時了解、解決員工生活和工作上的困難，充分傳達企業發展信息，鼓勵團隊精誠團結。 Establish the caring mechanism for talents in key positions. We will timely understand and solve the difficulty of employees in life and work through monthly or quarterly communication, fully convey corporate development information and encourage teamwork.
<p>人員流失管理 Staff turnover management</p>	<ul style="list-style-type: none"> - 實施人員流失追責，結合每月實際人員流動情況對相關的部門負責人進行考核。 Implement the accountability mechanism for staff turnover, and assess relevant department heads according to the actual monthly staff turnover. - 要求各牧場對基層離職人員進行訪談，了解員工離職原因，並針對發現的問題提出改善方案。 Conduct interviews with the resigned grass-roots employees to understand the reasons for resignation and propose improvement plans for the problems found.



2022年現代牧業員工流失率關鍵績效
Key Performances of Modern Dairy's Turnover Rate in 2022

指標 Indicator	單位 Unit	2022年度 2022
員工年度流失率 Annual turnover rate	%	1.57
按性別劃分的員工年度流失率 Annual turnover rate by gender	男性員工流失率 Turnover rate of male employees	1.35
	女性員工流失率 Turnover rate of female employees	2.01
按年齡劃分的員工年度流失率 Annual turnover rate by age	30歲及以下員工流失率 Turnover rate of employees aged 30 and below	2.68
	31歲-50歲員工流失率 Turnover rate of employees aged 31 to 50	1.63
	51歲及以上員工流失率 Turnover rate of employees aged 51 and above	1.65
按地區劃分的員工年度流失率 Annual turnover rate by region	察北大區 Chabei Region	1.86
	東北大區 Northeast Region	1.75
	華東大區 Eastern China Region	1.45
	華中大區 Central China Region	1.23
	華北大區 Northern China Region	1.76
	塞北大區 Saibei Region	1.95
	西北大區 Northwest Region	1.13
	內蒙大區 Inner Mongolia	1.22

指標 Indicator		單位 Unit	2022年度 2022
按職級劃分的員工年度流失率 Annual turnover rate by rank	初級員工 Junior employees	%	1.73
	中級管理層 Mid-level management	%	0.39
	高級管理層 Senior management	%	0.00

- **民主管理**
Democratic Management

現代牧業不斷加強民主管理，建立健全民主管理制度，尊重和保障員工的知情權、參與權、監督權和表達權，全方位維護員工民主權利。我們依據《中國工會章程》、《工會法》，加強建設完善企業職工代表大會管理制度，建立平等協商的溝通渠道，構建和諧的勞動關係，推動企業民主管理建設。截至2022年末，工會員工代表佔比1.51%，我們將持續提高員工代表比例，全方位維護全體員工的合法權益。2022年，公司召開員工代表大會，企業法人和員工雙方現場簽訂《集體合同》、《工資專項集體合同》、《女工特殊權益保護專項集體合同》，有效保障員工合法權益。

Modern Dairy continuously strengthens democratic management, and it has established a sound democratic management system to respect and protect employees' rights to know, participate, supervise and express, and safeguards employees' democratic rights in an all-round way. In accordance with the China Labour Union Constitution and the Labour Union Law, we have strengthened the construction and improvement of the management system of the employee's congress to establish a communication channel for equal consultation, build harmonious labour relations and promote the construction of democratic management. As of the end of 2022, the proportion of employee representatives in the labour union was 1.51%. We will continue to increase the proportion of employee representatives to comprehensively protect the legitimate rights and interests of all employees. In 2022, the Company held an employee congress, and both the corporate legal person and the employees signed the Collective Contract, the Special Collective Contract for Wages, and the Special Collective Contract for the Protection of Women Workers' Special Rights and Interests, effectively protecting the legitimate rights and interests of employees.



我們定期開展員工滿意度調查了解員工意願，通過民主生活會、群眾座談會、問卷調研廣泛徵集員工意見，並通過發布布告欄等方式推進集體協商談判、職代會、勞動爭議協調委員會，幫助員工建立暢通的溝通渠道。公司通過工會與員工等利益相關方積極協商建立匿名舉報申訴機制，設有員工熱線、意見箱等多種匿名舉報申訴途徑，當遇到侵犯人權、不公平對待、歧視、騷擾、虐待、不人道待遇、限制自由、強迫勞動、僱傭童工等行為發生時，鼓勵個人舉報侵犯員工權益的行為，公司將通過匿名保護、舉報平台權限設置、調查內容脫敏保密等方式切實保護舉報人不受到威脅、報復。當舉報申訴後台收到舉報信息後，工會將在保密情況下協調內部相關部門進行全面調查與核實，對於侵犯員工權益的事實行為，將依據規定積極採取處分、開除等處理行動，必要時移送司法機關，切實保障員工權益免受侵犯。報告期內，公司未出現侵犯上述員工權益的行為。

We regularly conduct employee satisfaction surveys to understand employees' wishes, and extensively solicit employees' opinions through democratic life meetings, mass forums and questionnaire surveys. We also help employees to establish smooth communication channels by promoting collective negotiation via bulletin boards, workers' congresses and labour dispute coordination committees. The Company actively negotiates and establishes an anonymous reporting and grievance mechanism through labour unions with employees and other stakeholders, and has set up various anonymous reporting and grievance channels such as employee hotlines and suggestion boxes. We encourage employees who experience human rights violations, unfair treatment, discrimination, harassment, abuse, inhuman treatment, restriction of freedom, forced labour and child labour to report violations of employees' rights. The Company will effectively protect whistle-blowers from threats and retaliation through anonymous protection, permission settings of the reporting platform and desensitization and confidentiality of investigation content. When the whistle-blowing and appeal backend receives the whistle-blowing information, the labour union will coordinate with the relevant internal departments to conduct a comprehensive investigation and verification under the circumstance of confidentiality. For acts that violate the rights and interests of employees, we will actively take action such as punishment and dismissal in accordance with regulations, and will transfer them to judicial organs if necessary, so as to effectively protect the rights and interests of employees from infringing. During the reporting period, the Company did not violate the rights and interests of employees as mentioned above.



案例
Case study

召開員工代表大會
Employee's congress

現代牧業召開員工代表大會，作為保障員工民主權利，促進員工和企業共同發展的有效平台和載體，職代會進一步將民主管理工作深化，確定了年度方針和目標，凡是重要決策、改革方案和涉及職工切身利益的重大事項，都經職代會審議通過，確保職工代表行使知情權、參與權、表達權、監督權。大會上全集團128個職工代表積極建言獻策，用智慧賦能業務提升，用行動踐行代表職責，全方位助力企業高質量發展。本次共收集員工提案38項，在員工代表大會立案提案25項。目前已完成16項提案，推進實施7項提案，未展開實施2項提案。

Modern Dairy held an employees' congress. As an effective platform and carrier to protect the democratic rights of employees and promote the common development of employees and the enterprise, the employees' congress further deepened the democratic management, and established the annual policy and goals. All important decisions, reform plans and major issues involving the immediate interests of employees shall be reviewed and approved by the employee congress to ensure that employee representatives exercise the right to know, participate, express and supervise. At the meeting, 128 employee representatives of the whole group actively offered their opinions and suggestions, empowered business improvement with wisdom, and fulfilled their duties as representatives with actions, so as to help the high-quality development of the Company in an all-round way. A total of 38 employee proposals were collected this time, and 25 proposals were put on file at the employee congress. At present, 16 proposals have been completed, seven proposals proceeded, and two proposals have not yet been implemented.



案例

Case study

員工之聲平台

Voice of Employees platform

為拓展公司全員溝通交流平台，暢通信息溝通渠道，及時了解員工的意見和建議，廣開言路，為公司戰略發展建言獻策，集團工會本着「建真言、獻良策」的原則，發布「員工之聲」建言平台，每一位牛人可以通過釘釘、微信識別二維碼，實時將合理化建議、投訴舉報、其它問題反饋到平台，集團工會第一時間反饋到相關部門回覆解決，集團針對員工提出的合理化建議給予獎勵。

In order to expand the communication platform for all employees, unblock the information communication channels, understand the opinions and suggestions of employees in a timely manner and make suggestions for the Company's strategic development, the Group's labour union released the "Voice of Employees" platform for advice in line with the principle of "make honest suggestions and offer good advice". Every employee can identify the QR code through DingTalk or WeChat to feed back reasonable suggestions, complaints and reports and other issues to the platform in real-time. The Group's labour union immediately reports back to the relevant departments for replies and solutions. The Group rewards employees for their reasonable suggestions.

- **員工關愛**
Employee Care

公司積極營造良好的工作氛圍，從層級、崗位、性別等多維度充分考慮員工的不同需求，定期開展關愛活動、凝心活動、社會公益活動等形式多樣的活動，給員工提供交流情感的機會，使員工在履職盡責中感受到組織的關懷，增進感情融合。

The Company actively creates a good working atmosphere, and fully considers the different needs of employees from multiple dimensions such as hierarchy, position and gender, and also regularly carries out various activities such as caring activities, heart-mind activities, social welfare activities, etc., to provide employees with opportunities to exchange emotions, so that employees can feel the care of the organization while performing their duties and enhance emotional integration.

公司定期開展主題教育活動、文化體育活動等內容豐富的活動，給員工提供展示才華的平台，使員工在繁忙的工作之餘放鬆心情、發揮才能、鍛煉意志、陶冶情操。各基層工會通過不斷創新活動形式，開展各類活動218場，充分深化了品牌活動，提升了員工對企業的滿意度，激發員工激發創造力，增加員工幸福感，促使員工以更加飽滿的熱情投身工作崗位。

The Company regularly carries out themed educational activities, cultural and sports activities and other content-rich activities to provide employees with a platform to showcase their talents, so that employees can relax, develop their talents, exercise their will and cultivate their sentiments after busy work. The grassroots-level labour unions carried out 218 activities of various kinds through continuous innovation of activity forms, which fully deepened the brand activities and improved employees' satisfaction with the Company, inspired employees to stimulate creativity, increased employees' happiness, and encouraged employees to devote themselves to work with more enthusiasm.

2022年，公司通過春節關愛、夏送清涼關愛、青貯關愛、疫情關愛、專項關愛、其它關愛等活動。共計支出工會關愛經費389.57萬元，讓員工切實感受到家的支持和溫暖，獲得感、幸福感、安全感，促進形成企業關愛員工、員工奉獻企業的濃厚氛圍。

In 2022, the Company organized activities such as Spring Festival Greetings, Summer Cooling Activities, "Silage Battle", Caring During the Epidemic and Special Love. A total of RMB3,895,700 was spent on the labour union funds. Employees authentically felt the support and warmth from the Group and the sense of gain, happiness, and security, thus promoting the formation of a strong atmosphere in which the Company cared for employees and employees contributed to the Company.



春節關愛

Spring Festival Greetings

在春節將至，歲寒情深時，現代牧業集團工會組織開展了春節關愛慰問活動。集團核心高管帶隊，聯合43個基層工會，為一線員工送去集團的關懷並向他們致以新春的美好祝福，共計慰問一線員工6,853人，慰問金額54.82萬元，慰問困難員工226人，慰問金額22.6萬元，對春節不能回家過年的員工，發放春節關愛禮包5,000餘份，累計慰問金額113萬元，實現了關愛全員覆蓋。沉甸甸的福利給每位員工送去了信心滿滿的希望和勁頭，激勵廣大員工發揮企業主人翁精神，用實際行動為集團發展做出更多貢獻。

When the Spring Festival was approaching with the cold winter, the labour union of Modern Dairy Group organized the Spring Festival greetings activities. The Group's core executives, together with 43 grassroots-level labour unions, sent the Group's greetings to the front-line employees and extended their best wishes for the Spring Festival. A total of 6,853 front-line employees were visited (the greetings amount of RMB548,200), including 226 employees in difficulty (the greetings amount of RMB226,000). For employees who could not go home for the Spring Festival, we distributed more than 5,000 Spring Festival gift packages, with a cumulative amount of RMB1.13 million, realizing the coverage of caring for all employees. These benefits gave every employee hope and motivation with confidence, and encouraged the majority of employees to develop and expand their sense of ownership and make more contributions to the development of the Group with practical actions.



夏送清涼

Summer Cooling Activities

為傳遞公司對一線職工的關愛，保障夏季高溫天氣的安全生產秩序，工會組織各基層工會開展「夏送清涼建功現代」員工關愛活動，本次活動慰問範圍覆蓋全司，慰問職工人數達8,297人，共支出慰問金額82.97萬元，通過本次活動夯實了工會工作基礎，切實增強了職工的凝聚力、向心力，激發了職工的工作熱情和幹勁，廣大職工用勤勞與汗水詮釋了天生要強的精神，凝心聚力、攜手奮進賦能現代牧業高質量發展。

In order to convey the Company's care for the front-line employees and ensure a safe production order in the hot summer, the labour union organized various summer cooling activities. This activity spanned the whole company and involved 8,297 employees, with a total expenditure of RMB829,700. This activity consolidated the work foundation of the labour union, effectively enhanced the cohesion and centripetal force of the employees, and stimulated the working enthusiasm of the employees. The vast number of employees had interpreted the spirit of "born to be strong" with diligence and sweat, and they concentrated their efforts and worked together to empower the high-quality development of Modern Dairy.



青貯關愛 “Silage Battle”

為保障青貯戰役更好、更快地取得全面勝利，工會特開展「工會服務青貯戰役」專項關愛項目，本次關愛針對一線收貯員工，共計投入資金53萬元。通過各類暖心關愛活動，更好的為集團高質量發展貢獻力量，充分發揮工會組織優勢，積極營造戰役氛圍，夯實「青貯戰役」根基，助力打贏「青貯收購攻堅戰」。



In order to ensure a better and faster overall victory in the “Silage Battle”, the labour union launched a special action. Such action was aimed at front-line silage-harvest employees, with a total investment of RMB530,000. Such heart-warming and caring activities better contributed to the high-quality development of the Group and gave full play to the organizational advantages — mpaign atmosphere, consolidated the foundation of the “silage battle” and helped win the “silage acquisition battle”.

疫情關愛 Caring During the Epidemic

在疫情防控的關鍵時刻，隔離員工面臨生活物資採買困難的情況，工會緊急協調資源，全力採購生活物資，及時將米麵糧油、蔬菜等生活保障物資，送到員工手中。現代牧業集團工會為537名堅守牧場一線的員工送上溫暖與保障，為50名困難員工家屬送去慰問及關愛，為152位居家隔離的職能員工送去關懷和物資，累計慰問金額20餘萬元。切實加強員工的歸屬感，形成了眾志成城、共克時艱的心理支撐，全力確保了員工隊伍和諧穩定、企業高質量發展。

At the critical moment of epidemic prevention and control, quarantined employees were facing difficulties in purchasing living materials. The labour union urgently coordinated resources, made every effort to purchase daily necessities, and delivered daily necessities such as rice, flour, grain, oil, and vegetables to employees in a timely manner. The labour union of Modern Dairy Group sent greetings and basic supplies to 537 employees who worked on the front lines of the farm, offered greetings and donations to the families of 50 employees in need, and provided greetings and supplies to 152 functional employees who were quarantined at home, with the cumulative amount of care of more than RMB200,000. This effectively strengthened the sense of belonging of the employees and formed the psychological support to unite as one and overcome difficulties together, thus ensuring the harmony and stability of the workforce and the high-quality development of the enterprise.

專項關愛 Special Love

通過開展「女職工關愛」、「元宵節關愛」、員工生日會等專項關愛，提升員工對公司的歸屬感和認同度，形成良好的企業向心力和凝聚力，讓每位員工感受的大家庭的溫暖，並進一步加深企業文化內涵深入人心。

By carrying out special care activities such as the "Care for Female Employees", the Lantern Festival activities and birthday parties, the employees' sense of belonging and recognition for the Company has been enhanced, and good corporate solidarity and cohesion have been formed. These activities made each employee feel the warmth of a big family and further deepened the corporate culture.



通過開展父親節活動、母親節活動、兒童節活動等其他關愛活動，增強了企業員工的感恩意識、孝道思想以及社會責任感，全面推動企業健康發展。

By carrying out other caring activities such as Father's Day activities, Mother's Day activities, and Children's Day activities, the employees' awareness of gratitude, filial piety and social responsibility have been enhanced to comprehensively facilitate the healthy development of the Company.



4.3 重執行的「養牛人」 Pragmatic “Cow Keeper”

現代牧業踐行社會責任，持續關注民生，積極助力公益，通過飼草生產、商業育種、奶(肉)牛養殖、資源化循環再生、乳品加工為一體的全產業鏈建設，持續提高農民在上游產業參與度和受益度，以奶業振興助力鄉村振興。公司採取本地化用工政策，積極吸收當地員工，拓寬當地人民的就業渠道。同時推動教育事業發展，幫助貧困學生享有平等的教育資源。全國疫情反覆，牧場向各地政府、醫療機構、防控站點進行各類現金、實物形式捐助。報告期內，公司公益慈善捐款贈物價值超過670萬元。

Modern Dairy fulfills its social responsibilities by constantly paying attention to people's livelihood and actively contributing to public welfare. Through the construction of the whole industrial chain integrating forage production, commercial breeding, dairy (meat) cattle breeding, resource recycling and dairy processing, it continues to increase the participation and benefit of farmers in the upstream industry, aiming at the revitalization of the dairy industry and the rural revitalization. The Company adopts a localized employment policy to actively absorb local employees and broaden the employment channels for local people. At the same time, it promotes the development of education and helps poor students get access to equal educational resources. Due to the relapses of the epidemic across the country, our farms made donations in cash and in-kind to local governments, medical institutions and prevention and control sites. During the reporting period, the Company's charity donation value exceeded RMB6.7 million.

- 愛心活動
Love Activities

現代牧業積極投入各項慈善公益事業，參加「中國小康牛奶活動」等大型公益活動，為貧困地區學校及家庭捐贈牛奶。在傳遞愛的正能量的同時，也得到了政府的高度認可，不僅提升了企業形象和知名度，更構建了良好的政企關係，為共建和諧社會貢獻出現代力量。

Modern Dairy actively participates in various charity and public welfare undertakings. We participated in large-scale public welfare activities, such as the “Milk Action to Build a Well-off Society in China (中國小康牛奶行動)”, and donated milk to schools and families in poor areas. While conveying the positive energy of love, we have also been highly recognized by the government, which not only enhanced the corporate image and popularity, but also built a good government-enterprise relationship and contributed modern strength to the joint construction of a harmonious society.

現代牧業協同養牛人基金，多次開展愛心公益活動，2022年通過愛心捐款座談會、暖心慰問，向敬老院的老人送去了濃濃真情和關愛。此外，養牛人基金會立足現代牧業，以「繼承與弘揚養牛人思想和精神，關心奶牛養殖從業人員的健康發展，促進社會和諧」為宗旨，以「救助自然災害；資助行業貧困人群其他可資助的情形；開展宣傳交流，促進對養牛人的關注」為服務目標，輻射行業，致力於幫助有困難的員工，並開展扶貧、幫困、助學、賑災等公益慈善活動，弘揚慈善文化，促進社會主義精神文明建設。

Modern Dairy cooperated with the Cattlemen Foundation to carry out charity activities many times. In 2022, through the charity donation symposium and heart-warming greetings, we showed our warmest solicitude to the elderly in the nursing home. In addition, in cooperation with Modern Dairy, the Cattlemen Foundation was committed to helping employees in difficulties throughout the industry with the purpose of "inheriting and carrying forward the thoughts and spirits of cattlemen, caring for the healthy development of dairy farming practitioners and promoting social harmony" and by taking "relief from natural disasters; subsidizing the impoverished people in the industry in other situations that can be subsidized; carrying out publicity and communication, and arousing concern for cattlemen" as the service goal. It also carried out public welfare and charity activities such as poverty alleviation, helping the poor, student aids and disaster relief, promoting charity culture and promoting the construction of socialist spiritual civilization.

報告期內，由集團工會統籌，共計開展公益活動76次。通過開展公益活動，不僅共同傳遞愛的正能量，也得到了政府的高度認可，提升了企業形象和知名度，構建了良好的政企關係，為共建和諧社會貢獻出現代力量。

During the reporting period, under the overall planning of the Group's labour union, a total of 76 public welfare activities have been carried out. While conveying the positive energy of love, we have also been highly recognized by the government, which not only enhanced the corporate image and popularity, but also built a good government-enterprise relationship and contributed modern strength to the joint construction of a harmonious society.

- **援助疫區**
Aid to Epidemic Areas

全國疫情反覆，各地防控措施收緊。牧場在保障正常運營的前提下，向各地政府、醫療機構、防控站點進行各類現金、實物形式捐助，得到了來自社會各界的高度贊許和表彰。

Due to the relapses of the epidemic across the country, prevention and control measures have been tightened in various places. Under the premise of ensuring normal operation, our farms made donations in cash and in-kind to local governments, medical institutions and prevention and control sites, which was highly praised and commended from all walks of life.

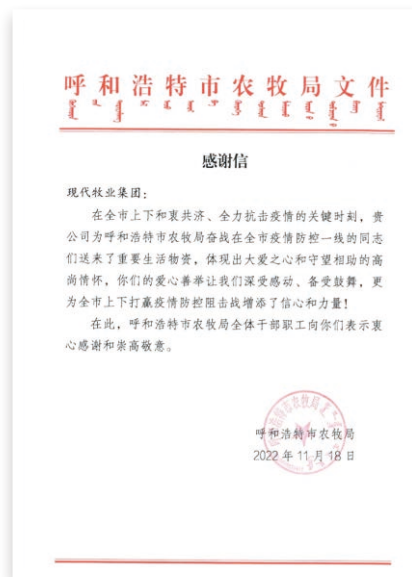


案例
Case study

防疫助困
Epidemic prevention and poverty alleviation

2022年現代牧業內蒙大區牧場援助內蒙古疫情防控工作，商河牧場響應政府號召，在商河突發疫情時期，迅速實行封控管理，迎難而上，為抗擊疫情，奉獻力量。為支援商河縣沙河鎮人民政府抗疫工作，彰顯企業責任，現代牧業第一時間協調牛奶、方便食品等物資運抵防疫一線，共計12萬元。

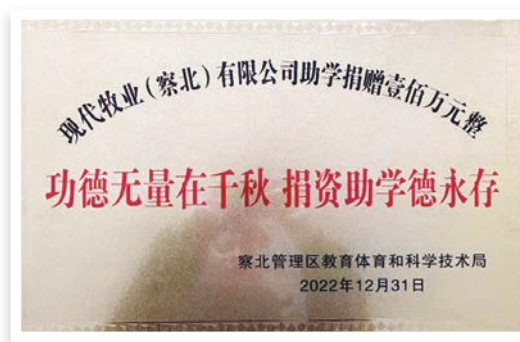
In 2022, the farms in the Inner Mongolia region of Modern Dairy assisted in the epidemic prevention and control in Inner Mongolia. In response to the government's call, Shanghe farm quickly implemented closure management during the outbreak of the epidemic in Shanghe by facing up to difficulties, contributing to the fight against the epidemic. In order to support the anti-epidemic work of the People's Government of Shahe Town, Shanghe County and demonstrate its corporate responsibility, Modern Dairy promptly coordinated the delivery of milk, convenience food and other materials to the front line of epidemic prevention, with a total value of RMB120,000.



- **希望助學**
Student Aids

現代牧業支持國家脫貧攻堅事業，將教育扶貧作為重要手段和關鍵抓手，多次開展向困難地區發動助學捐贈、積極參與公益活動、關愛家鄉留守兒童等活動。公司為助力察北教育事業，向張家口市察北管理區教育體育和科學技術局捐贈100萬元。

Modern Dairy supports the national poverty alleviation cause. Taking education and poverty alleviation as an important means and key starting point, we have carried out many activities such as providing student donations to difficult areas, actively participating in public welfare activities, and caring for left-behind children. In order to support the education cause in Chabei, the Company donated RMB1 million to the Education, Sports and Science and Technology Bureau of Chabei Management District, Zhangjiakou City.



現代牧業榮獲助學捐贈獎牌

Modern Dairy won the "Student-aid Donation" medal

- **鄉村振興**
Rural Revitalization

現代牧業着眼國家重點戰略需要，充分發揮農業產業化國家重點龍頭企業帶動作用，積極推進鞏固拓展脫貧攻堅成果同鄉村振興的有效銜接。堅持對牧場週邊的貧困村縣進行實物捐贈，拓寬貧困戶就業渠道。同時，積極協助政府修建健身廣場、清理河道、鋪設鄉道，為助力地區扶貧攻堅貢獻力量。

Focusing on China's key strategic needs, Modern Dairy gives full play to the leading role of national key leading enterprises in agricultural industrialization, and actively promotes the effective connection between consolidating and expanding the achievements of poverty alleviation and rural revitalization. We continue to make in-kind donations to poor villages and counties around the farms and expand employment channels for poor households. We have also been actively assisting the governments in building fitness squares, clearing rivers and laying rural roads, contributing to regional poverty alleviation.



案例
Case study

深耕鄉村振興事業，幫扶當地就業
Participating in the cause of rural revitalization and helping local employment

現代牧業推行「企業+基地+農戶」的飼草產業化經營模式，積極布局週邊地區飼草料種植業發展。2022年僅在皖三家牧場奶牛存欄量近7萬頭日產鮮奶量1,300噸，帶動牧場週邊飼草種植15萬畝。Modern Dairy promotes the forage industrialization business model of “enterprise + base + farmers”, and actively deploys the development of forage planting in surrounding areas. In 2022, there were nearly 70,000 dairy cows in the three farms in Anhui, with a daily output of 1,300 tons of fresh milk, which drove the planting of 150,000 mu of forage grass around the farms.

各牧場與週邊地區及農商戶進行深度合作幫扶，優先為當地貧困群體開放部分崗位，全面帶動社區就業發展。

Our farms carried out in-depth cooperation and assistance with farmers and merchants in the surrounding areas, giving priority to opening some jobs for local poor groups, which comprehensively promoted the employment development of the community.

- 開展校企合作：以教育部校企共建合作為契機年度簽約高等院校16所，輸入應屆學生236人。

School-enterprise cooperation: Taking the school-enterprise cooperation initiative proposed by the Ministry of Education as an opportunity, we signed contracts with 16 colleges and universities and recruited 236 fresh graduates during the year.

- 開展村企合作：簽訂139個村鎮涉及14個省市，現有員工中僱傭運營所在地員工佔全體員工數的83%，有效支撐的運營所在地的居民就業。

Village-enterprise cooperation: We signed cooperation agreements with 139 villages and towns in 14 provinces and cities. Among the existing employees, 83% of the employees were from the places where the operations were located, effectively supporting the employment of residents in the places where the operations were located.



2022年現代牧業在社區投資方面的關鍵績效
The key performance of Modern Dairy in terms of community investment in 2022

指標名稱 Indicators	指標單位 Unit	2022年 2022
志願服務總時數 Total hours of volunteer service	小時 Hour	840
志願服務平均時數 Average hours of volunteer service	小時／人次 Hour/person	26.25
參與社區志願者人次 Number of volunteers participating in the community activities	人 Person	32



未來展望

Future Prospect

2023年，現代牧業將保持奮楫爭先的鬥志，全體員工將上下同欲、同頻共振，以「天生要強」的姿態，共同譜寫牧業發展新篇章。

In 2023, Modern Dairy will maintain the fighting spirit of "striving for the first place", and all employees will work together to write a new chapter in the development of animal husbandry with the attitude of "being born to be strong".

未來我們將針對「智造」和「強鏈補鏈」環節持續發力，研發具有自主知識產權的奶牛數智化養殖系統，高效高質地推進行業數智化升級轉型。在催生更高品質民族品牌的同時，積極帶動產業體系建設，打造經濟高質量發展高地。

In the future, we will continue to focus on the links of "intelligent manufacturing" and "strengthening and supplementing the chain", and develop a digital intelligent breeding system for dairy cows with independent intellectual property rights, so as to promote the digital intelligent upgrading and transformation of the industry efficiently and with high quality. While promoting higher-quality national brands, it will actively promote the construction of industrial systems and create high-quality economic development highlands.

我們將繼續秉承低碳、生態、綠色的發展理念，完善綠色循環產業鏈條，通過開闢綠色發展之路，為行業提供更加優質、安全的原奶，全面助力中國奶業行穩致遠、高質量發展。

We will continue to uphold the concept of low-carbon, ecological and green development to improve the green recycling industry chain, and by opening up a road of green development, we will also provide the industry with more high-quality and safer raw milk, comprehensively helping China's dairy industry to develop steadily and with high quality.

我們必將繼續堅持安全健康第一的價值觀，認真謀劃奶業發展新藍圖，凝心聚力、勇毅前行，為快速推進奶業振興步伐、全面落地國民營養計劃貢獻力量。

We will continue to adhere to the value of "safety and health come first", earnestly plan a new blueprint for the development of the dairy industry, concentrate our efforts and move forward with courage, contributing to the rapid promotion of the revitalization of the dairy industry and the comprehensive implementation of the national nutrition plan.



附錄：港交所ESG報告指引指標索引

Appendix: HKEx ESG Reporting Guide Indicator Index

序號 No.	指標描述 Description	披露位置 Disclosure
A1 排放物 Emissions	<p>一般披露 General Disclosure</p> <p>有關廢氣及溫室氣體排放、向水及土地的排污、有害及無害廢棄物的產生等的： Information on:</p> <p>(a) 政策；及 the policies; and</p> <p>(b) 遵守對發行人有重大影響的相關法律及規例的資料。 relating to air and greenhouse gas emission, discharge into water and land, and generation of hazardous and non-hazardous waste.</p> <p>註： 廢氣排放包括氮氧化物、硫氧化物及其他受國家法律及規例規管的污染物。 Note: Air emissions include NO_x, SO_x, and other pollutants regulated under national laws and regulations.</p> <p>溫室氣體包括二氧化碳、甲烷、氧化亞氮、氫氟碳化合物、全氟化碳及六氟化硫。 Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.</p> <p>有害廢棄物指國家規例所界定者。 Hazardous wastes are those defined by national regulations.</p>	<p>1.3 開展雙碳行動 Carrying out the "Dual-carbon" Project</p> <p>1.5 踐行綠色運營 Practicing Green Operation</p>
	<p>A1.1 排放物種類及相關排放數據。 The types of emissions and respective emissions data.</p>	<p>1.3 開展雙碳行動 Carrying out the "Dual-carbon" Project</p> <p>1.5 踐行綠色運營 Practicing Green Operation</p>



序號 No.	指標描述 Description	披露位置 Disclosure
	<p>A1.2 直接(範圍1)及間接能源(範圍2)溫室氣體總排放量(以噸計算)及(如適用)密度(如以每產量單位、每項設施計算)。</p> <p>Greenhouse gas emissions in total (in tonnes) from direct (Scope I) and indirect (Scope II) energy and, where appropriate, intensity (e.g. per unit of production volume, per facility).</p>	<p>1.5 踐行綠色運營 Practicing Green Operation</p>
	<p>A1.3 所產生有害廢棄物總量(以重量或體積計算)及(如適用)密度(如以每產量單位、每項設施計算、每位正式僱員)。</p> <p>Total hazardous waste produced (by weight or volume) and, where appropriate, intensity (e.g. per unit of production volume, per facility or per regular employee).</p>	<p>1.5 踐行綠色運營 Practicing Green Operation</p>
	<p>A1.4 所產生無害廢棄物總量(以重量或體積計算)及(如適用)密度(如以每產量單位、每項設施計算、每位正式僱員)。</p> <p>Total non-hazardous waste produced (by weight or volume) and, where appropriate, intensity (e.g. per unit of production volume, per facility or per regular employee).</p>	<p>1.5 踐行綠色運營 Practicing Green Operation</p>
	<p>A1.5 描述所訂立的排放量目標及為達到這些目標所採取的步驟。</p> <p>Description of emissions targets set and steps taken to achieve them.</p>	<p>1.3 開展雙碳行動 Carrying out the "Dual-carbon" Project</p> <p>1.5 踐行綠色運營 Practicing Green Operation</p>
	<p>A1.6 描述處理有害及無害廢棄物的方法，及描述所訂立的減廢目標及為達到這些目標所採取的步驟。</p> <p>Description of how hazardous and non-hazardous wastes are handled, and description of waste reduction targets set and steps taken to achieve them.</p>	<p>1.5 踐行綠色運營 Practicing Green Operation</p>



序號 No.	指標描述 Description	披露位置 Disclosure
A2 資源使用 Use of Resources General Disclosure	<p>一般披露 General Disclosure</p> <p>有效使用資源(包括能源、水及其他原材料)的政策。 Policies on the efficient use of resources, including energy, water and other raw materials.</p> <p>註：資源可用於生產、儲存、運輸、樓宇、電子設備等。 Note: Resources may be used in production, in storage, transportation, in buildings, electronic equipment, etc.</p>	1.5 踐行綠色運營 Practicing Green Operation
	<p>A2.1 按類型劃分的直接及／或間接能源(如電、氣或油)總耗量(以每千秒千瓦時計算)及密度(如以每產量單位、每項設施計算)。 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).</p>	1.5 踐行綠色運營 Practicing Green Operation
	<p>A2.2 總耗水量及密度(如以每產量單位、每項設施計算)。 Water consumption in total and intensity (e.g. per unit of production volume, per facility).</p>	1.5 踐行綠色運營 Practicing Green Operation
	<p>A2.3 描述所訂立的能源使用效益目標以及為達到這些目標所採取的步驟。 Description of energy efficiency goals set and steps taken to achieve them.</p>	1.5 踐行綠色運營 Practicing Green Operation
	<p>A2.4 描述求取適用水源上可有任何問題，以及訂立的用水效益目標及為達到這些目標所採取的步驟。 Description of whether there is any issue in sourcing water that is fit for purpose, and water efficiency targets set and steps taken to achieve them.</p>	1.5 踐行綠色運營 Practicing Green Operation
	<p>A2.5 製成品所用包裝材料的總量(以噸計算)及(如適用)每生產單位佔量。 Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.</p>	1.5 踐行綠色運營 Practicing Green Operation



序號 No.	指標描述 Description	披露位置 Disclosure
A3 環境及天然資源 Environment and Natural Resources	<p>一般披露 General Disclosure</p> <p>減低發行人對環境及天然資源造成重大影響的政策。 Policies on minimising the issuer's significant impact on the environment and natural resources.</p>	<p>1.2 發展可持續農業 Developing Sustainable Agriculture</p> <p>1.3 開展雙碳行動 Carrying out the "Dual-carbon" Project</p> <p>1.5 踐行綠色運營 Practicing Green Operation</p>
	<p>A3.1 描述業務活動對環境及天然資源的重大影響及已採取管理有關影響的行動。 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.</p>	<p>1.2 發展可持續農業 Developing Sustainable Agriculture</p> <p>1.3 開展雙碳行動 Carrying out the "Dual-carbon" Project</p> <p>1.5 踐行綠色運營 Practicing Green Operation</p>



序號 No.	指標描述 Description	披露位置 Disclosure
A4 氣候變化 Climate Change	<p>一般披露 General Disclosure</p> <p>識別及應對已經及可能會對發行人產生影響的重大氣候相關事宜的政策。 Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.</p>	1.4 應對氣候變化 Addressing Climate Change
	<p>A4.1 描述已經及可能會對發行人產生影響的重大氣候相關事宜，及應對的行動。 Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.</p>	1.4 應對氣候變化 Addressing Climate Change
B1 僱傭 Employment	<p>一般披露 General Disclosure</p> <p>有關薪酬及解僱、招聘及晉升、工作時數、假期、平等機會、多元化、反歧視以及其他待遇及福利的： Information on:</p> <p>(a) 政策；及 the policies; and</p> <p>(b) 遵守對發行人有重大影響的相關法律及規例的資料。 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.</p>	4.1 謀福利的「養牛人」 Responsible “Cow Keeper”
	<p>B1.1 按性別、僱傭類型(如全職或兼職)、年齡組別及地區劃分的僱員總數。 Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region.</p>	4.1 謀福利的「養牛人」 Responsible “Cow Keeper”
	<p>B1.2 按性別、年齡組別及地區劃分的僱員流失比率。 Employee turnover rate by gender, age group and geographical region.</p>	4.1 謀福利的「養牛人」 Responsible “Cow Keeper”



序號 No.	指標描述 Description	披露位置 Disclosure
B2 健康與安全 Health and Safety	<p>一般披露 General Disclosure</p> <p>有關提供安全工作環境及保護僱員避免職業性危害的： Information on:</p> <p>(a) 政策，及； the policies; and</p> <p>(b) 遵守對發行人有重大影響的相關法律及規例的資料。 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.</p>	4.1 謀福利的「養牛人」 Responsible “Cow Keeper”
	B2.1 過去三年(包括匯報年度)每年因工亡故的人數及比率。 Number and rate of work-related fatalities occurred in each of the past three years including the reporting year	4.1 謀福利的「養牛人」 Responsible “Cow Keeper”
	B2.2 因工傷損失工作日數。 Lost days due to work injury.	4.1 謀福利的「養牛人」 Responsible “Cow Keeper”
	B2.3 描述所採納的職業健康與安全措施，以及相關執行及監察方法。 Description of occupational health and safety measures adopted, and how they are implemented and monitored.	4.1 謀福利的「養牛人」 Responsible “Cow Keeper”



序號 No.	指標描述 Description	披露位置 Disclosure
B3 發展及培訓 Development and Training	<p>一般披露 General Disclosure</p> <p>有關提升僱員履行工作職責的知識及技能的政策。描述培訓活動。 Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.</p> <p>註： 培訓指職業培訓，可包括由僱主付費的內外部課程。 Note: Training refers to vocational training. It may include internal and external courses paid by the employer.</p>	4.2 謀進取的「養牛人」 Ambitious "Cow Keeper"
	<p>B3.1 按性別及僱員類別(如高級管理層、中級管理層等)劃分的受訓僱員百分比。 The percentage of employees trained by gender and employee category (e.g. senior management, middle management).</p>	4.2 謀進取的「養牛人」 Ambitious "Cow Keeper"
	<p>B3.2 按性別及僱員類別劃分，每名僱員完成受訓的平均時數。 The average training hours completed per employee by gender and employee category.</p>	4.2 謀進取的「養牛人」 Ambitious "Cow Keeper"



序號 No.	指標描述 Description	披露位置 Disclosure
B4 勞工準則 Labour Standards	<p>一般披露 General Disclosure</p> <p>有關防止童工或強制勞工的： Information on:</p> <p>(a) 政策；及 the policies; and</p> <p>(b) 遵守對發行人有重大影響的相關法律及規例的資料。 compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child or forced labour.</p>	4.1 謀福利的「養牛人」 Responsible “Cow Keeper”
	B4.1 描述檢討招聘慣例的措施以避免童工及強制勞工。 Description of measures to review employment practices to avoid the child and forced labour.	4.1 謀福利的「養牛人」 Responsible “Cow Keeper”
	B4.2 描述在發現違規情況時消除有關情況所採取的步驟。 Description of steps taken to eliminate such practices when discovered.	4.1 謀福利的「養牛人」 Responsible “Cow Keeper”



序號 No.	指標描述 Description	披露位置 Disclosure
B5 供應鏈管理 Supply Chain Management	<p>一般披露 General Disclosure</p> <p>管理供應鏈的環境及社會風險政策。 Policies on managing environmental and social risks of the supply chain.</p>	3.3 可持續供應鏈 Sustainable Supply Chain
	<p>B5.1 按地區劃分的供應商數目。 Number of suppliers by geographical region.</p>	3.3 可持續供應鏈 Sustainable Supply Chain
	<p>B5.2 描述有關聘用供貨商的慣例，向其執行有關慣例的供應商數目、以及有關慣例的執行及監察方法 Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored</p>	3.3 可持續供應鏈 Sustainable Supply Chain
	<p>B5.3 描述有關識別供應鏈每個環節的環境及社會風險的慣例，以及相關執行及監察方法。 Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.</p>	3.3 可持續供應鏈 Sustainable Supply Chain
	<p>B5.4 描述在揀選供貨商時促使多用環保產品及服務的慣例，以及相關執行及監察方法。 Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.</p>	3.3 可持續供應鏈 Sustainable Supply Chain



序號 No.	指標描述 Description	披露位置 Disclosure
B6 產品責任 Product Responsibility	<p>一般披露 General Disclosure</p> <p>有關所提供產品和服務的健康與安全、廣告、標籤及私隱事宜以及補救方法的：</p> <p>Information on:</p> <p>(a) 政策；及 the policies; and</p> <p>(b) 遵守對發行人有重大影響的相關法律及規例的資料。 compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.</p>	<p>3.1 追求卓越品質 Pursuing Excellent Quality</p> <p>3.2 提供優質服務 Providing Quality Services</p>
	<p>B6.1 已售或已運送產品總數中因安全與健康理由而須回收的百分比。 Percentage of total products sold or shipped subject to recalls for safety and health reasons.</p>	<p>3.1 追求卓越品質 Pursuing Excellent Quality</p>
	<p>B6.2 接獲關於產品及服務的投訴數目以及應對方法。 Number of products and service-related complaints received and how they are dealt with.</p>	<p>3.1 追求卓越品質 Pursuing Excellent Quality</p>
	<p>B6.3 描述與維護及保障知識產權有關的慣例。 Description of practices relating to observing and protecting intellectual property rights.</p>	<p>1.1 打造智慧牧場 Building Smart Farms</p>
	<p>B6.4 描述質量檢定過程及產品回收程序。 Description of quality assurance process and recall procedures.</p>	<p>3.1 追求卓越品質 Pursuing Excellent Quality</p>
	<p>B6.5 描述消費資料保障及隱私政策，以及相關執行及監察方法。 Description of consumer data protection and privacy policies, and how they are implemented and monitored.</p>	<p>3.2 提供優質服務 Providing Quality Services</p>



序號 No.	指標描述 Description	披露位置 Disclosure
B7 反貪污 Anti-corruption	<p>一般披露 General Disclosure</p> <p>有關防止賄賂、勒索、欺詐及洗黑錢的： Information on:</p> <p>(a) 政策；及 the policies; and</p> <p>(b) 遵守對發行人有重大影響的相關法律及規例的資料。 compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.</p>	可持續發展管理 Sustainable Development Management
	<p>B7.1 於匯報期內對發行人或其僱員提出並已審結的貪污訴訟案件的數目及訴訟結果。 Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.</p>	可持續發展管理 Sustainable Development Management
	<p>B7.2 描述防範措施及舉報程序，以及相關執行及監察方法。 Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.</p>	可持續發展管理 Sustainable Development Management
	<p>B7.3 描述向董事及員工提供的反貪污培訓。 Description of anti-corruption training provided to directors and staff.</p>	可持續發展管理 Sustainable Development Management



序號 No.	指標描述 Description	披露位置 Disclosure
B8 社區投資 Community Investment	<p>一般披露 General Disclosure</p> <p>有關以社區參與來了解營運所在社區需要和確保其業務活動會考慮社區利益的政策。 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</p>	4.3 重執行的「養牛人」 Pragmatic "Cow Keeper"
	<p>B8.1 專注貢獻範疇(如教育、環境事宜、勞工需求、健康、文化、體育)。 Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).</p>	4.3 重執行的「養牛人」 Pragmatic "Cow Keeper"
	<p>B8.2 在專注範疇所動用資源(如金錢或時間)。 Resources contributed (e.g. money or time) to the focus area.</p>	4.3 重執行的「養牛人」 Pragmatic "Cow Keeper"





MODERN FARMING
现代牧业

China Modern Dairy Holdings Ltd.

中國現代牧業控股有限公司

(Incorporated in the Cayman Islands with limited liability)
(於開曼群島註冊成立之有限公司)

Stock Code 股份代號 : 1117



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純



Genuineness
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Vitality
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Freshness
鮮

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