



China Modern Dairy Holdings Ltd.

中國現代牧業控股有限公司

Stock Code 股份代號：1117

2023 INTERIM RESULTS



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Financial Highlights

Two Records: Yields and production of raw milk reached a historical high

Two Belows: The drop in milk prices and the increase in the cost of milk were below market levels

Two Increases: Substantial increase in operating cash flow and free cash flow

One Optimization: Significant optimization of the debt structure and a steady decline in financial leverage

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Business Updates

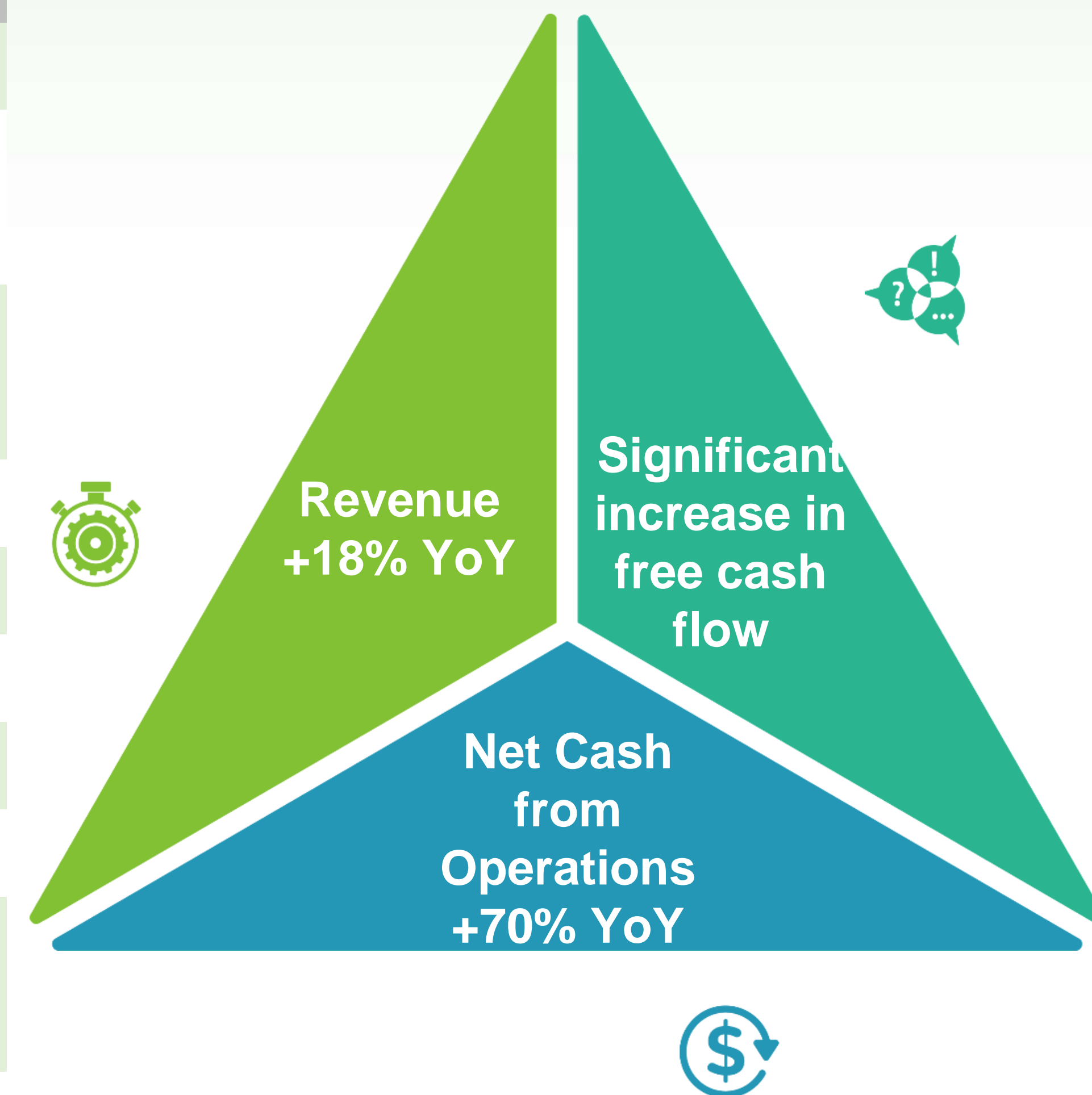
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Industry Prospects



2023 Interim Results Review

RMB Million	2023H1	2022H1	Change
Revenue	6,633	5,632	+18%
include: raw milk sales	5,044	4,858	+4%
new businesses	1,589	774	+105%
Gross Profit	1,521	1,655	-8%
Gross Profit Margin (%)	22.9	29.4	-6.5 ppt
include: raw milk sales (%)	28.3	32.2	-3.9 ppt
Cash EBITDA ⁽¹⁾	1,271	1,441	-12%
Cash EBITDA Margin (%)	19.2	25.6	-6.4 ppt
Net Profit	218	531	-59%
Earnings per share (RMB cents)	2.66	6.46	-59%
Net Cash from Operations	2,183	1,282	+70%
Free Cash Flow⁽²⁾	897	-559	N/A



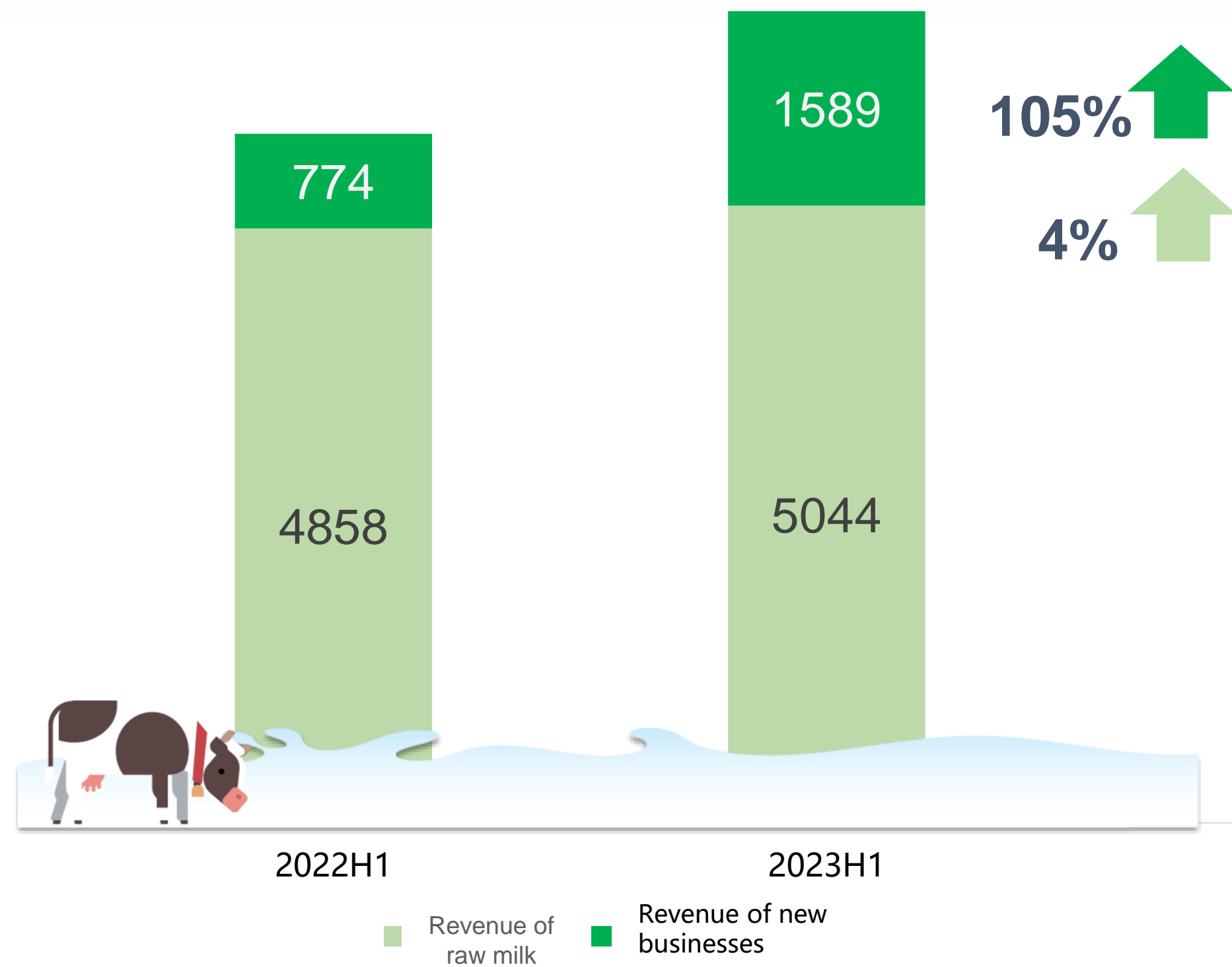
Note:

(1) Cash EBITDA is defined as profit/(loss) before finance costs and tax having added back: i) depreciation for property, plant and equipment and right-of-use assets charged to profit or loss, ii) other gains and losses, net, iii) impairment losses, net of reversal, iv) loss arising from changes in fair value less costs to sell of dairy cows.

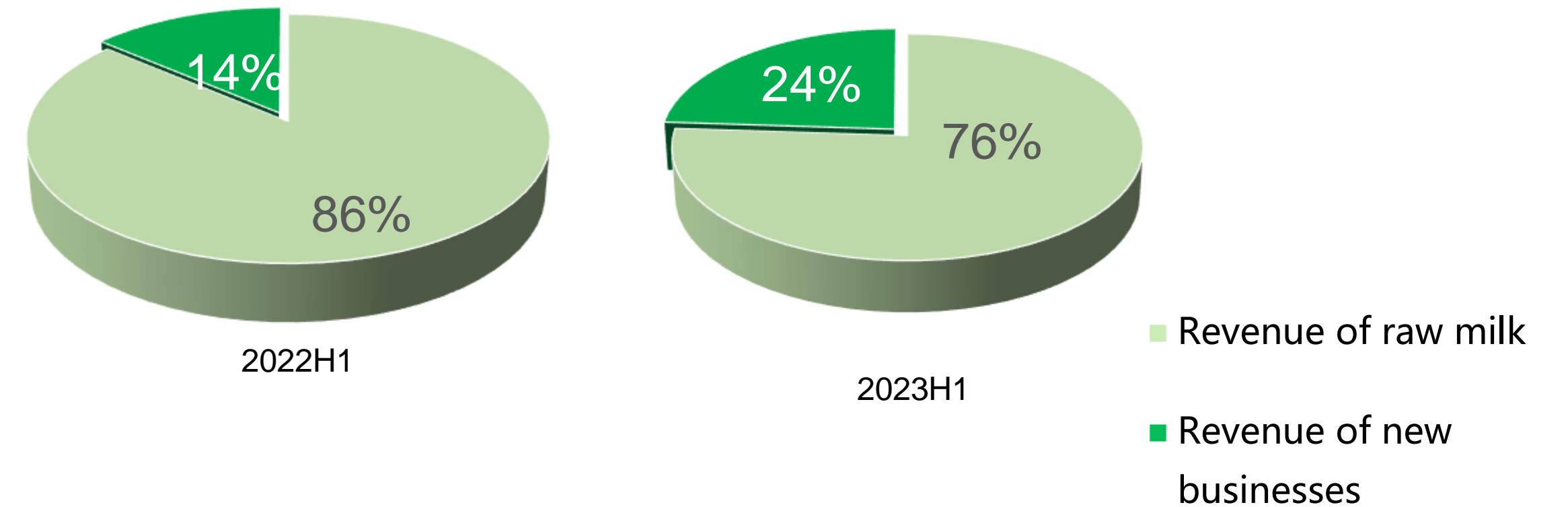
(2) Free cash flow is defined as net cash from operations less net cash outflow from investing activities.

Steady Growth in Raw Milk Sales and New Businesses

\$ Sales by business (RMB million)

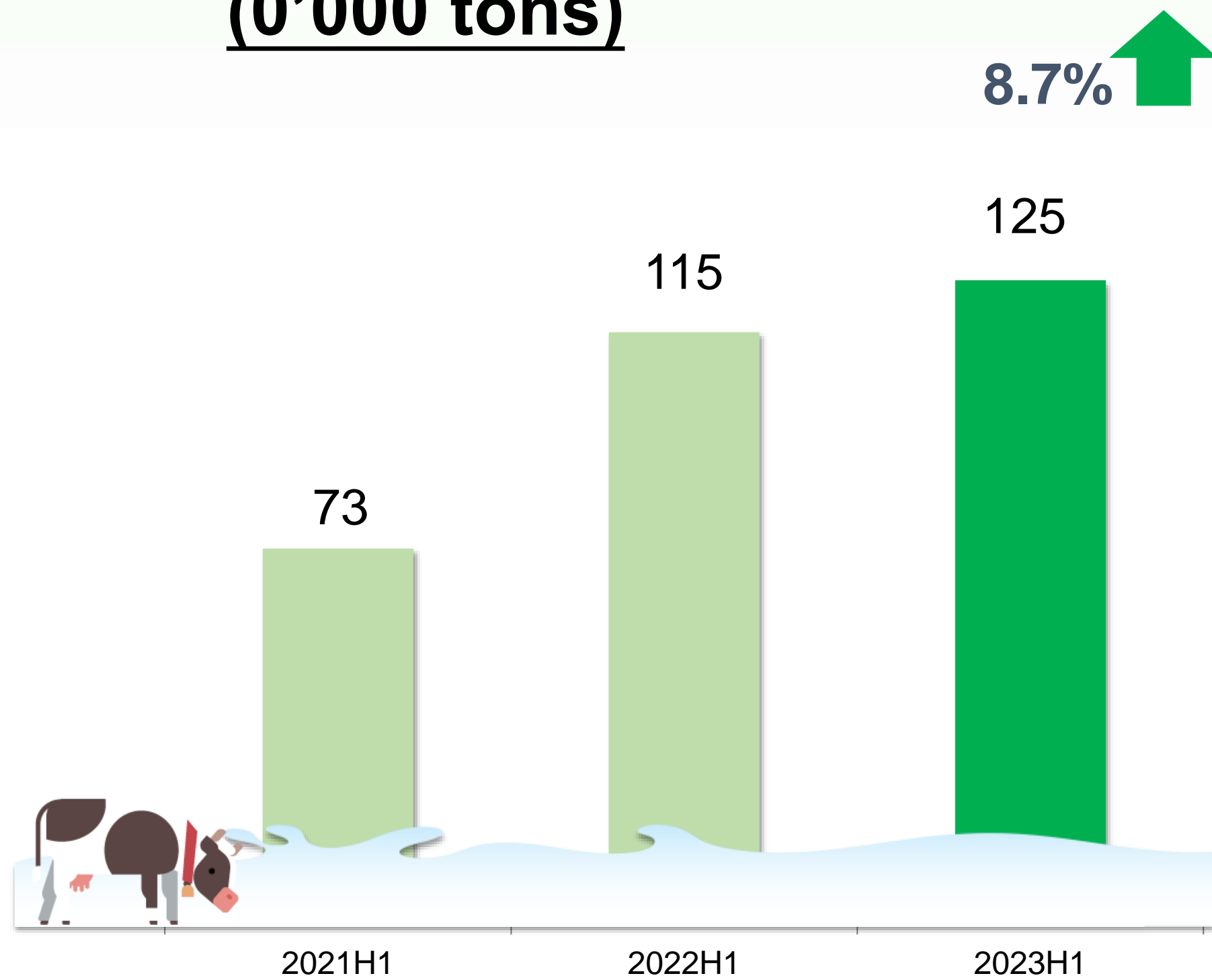



\$ Increasing proportion of new business revenue

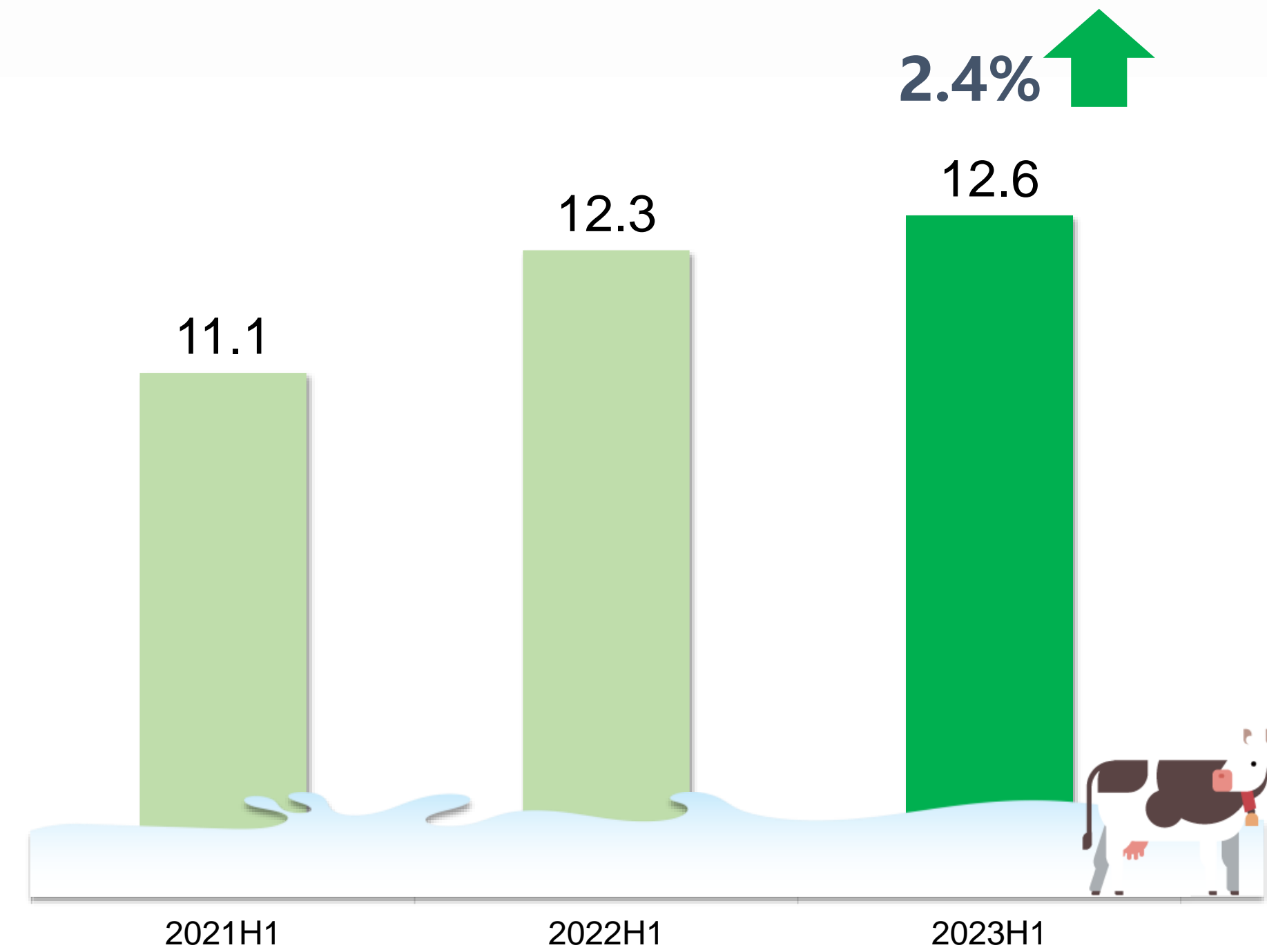


Steady Increase in Production Volume of Raw Milk

 **Production Volume**
(0'000 tons)

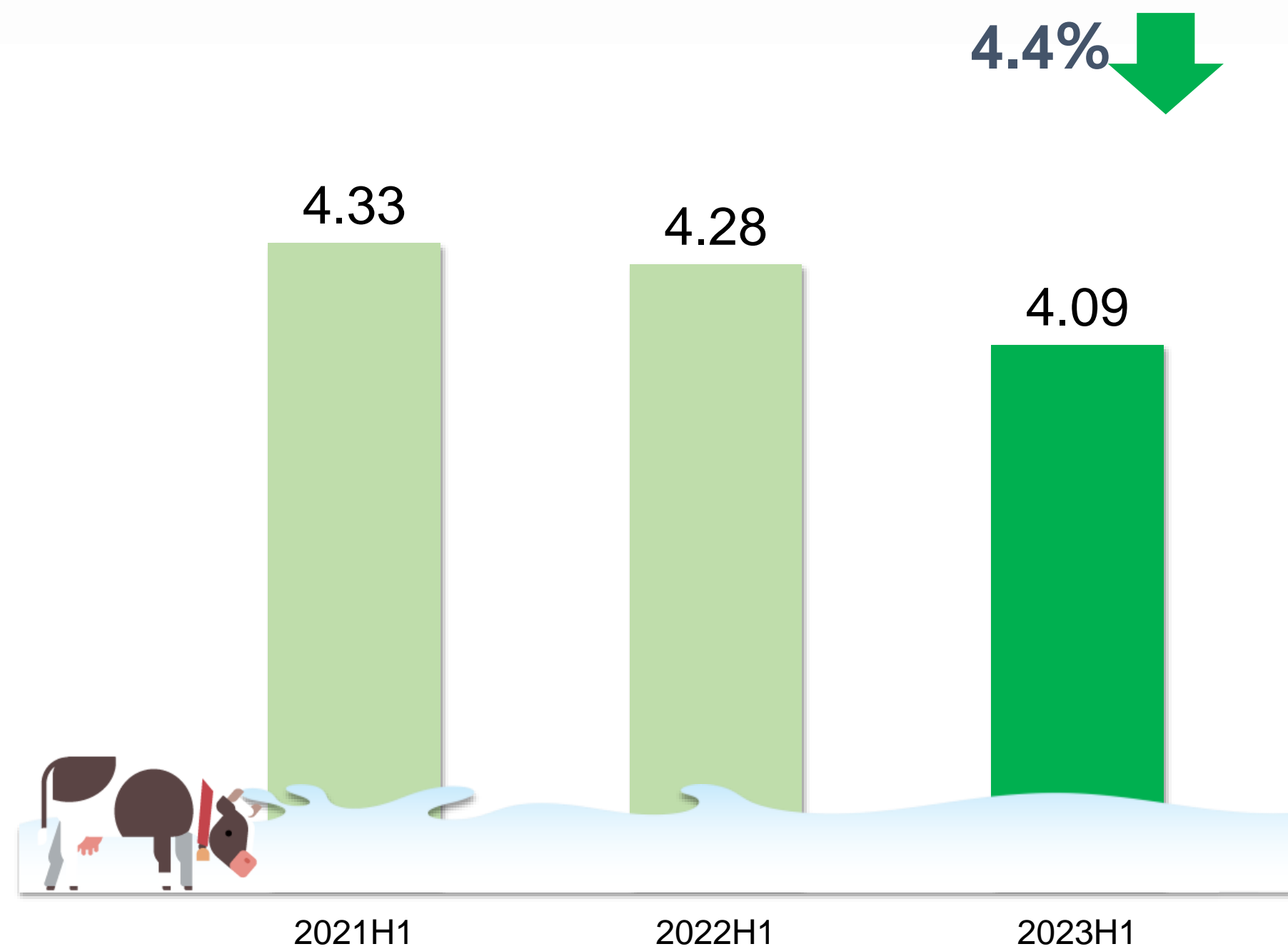


 **Unit Yield per Milkable Cow**
(tons/head/year)



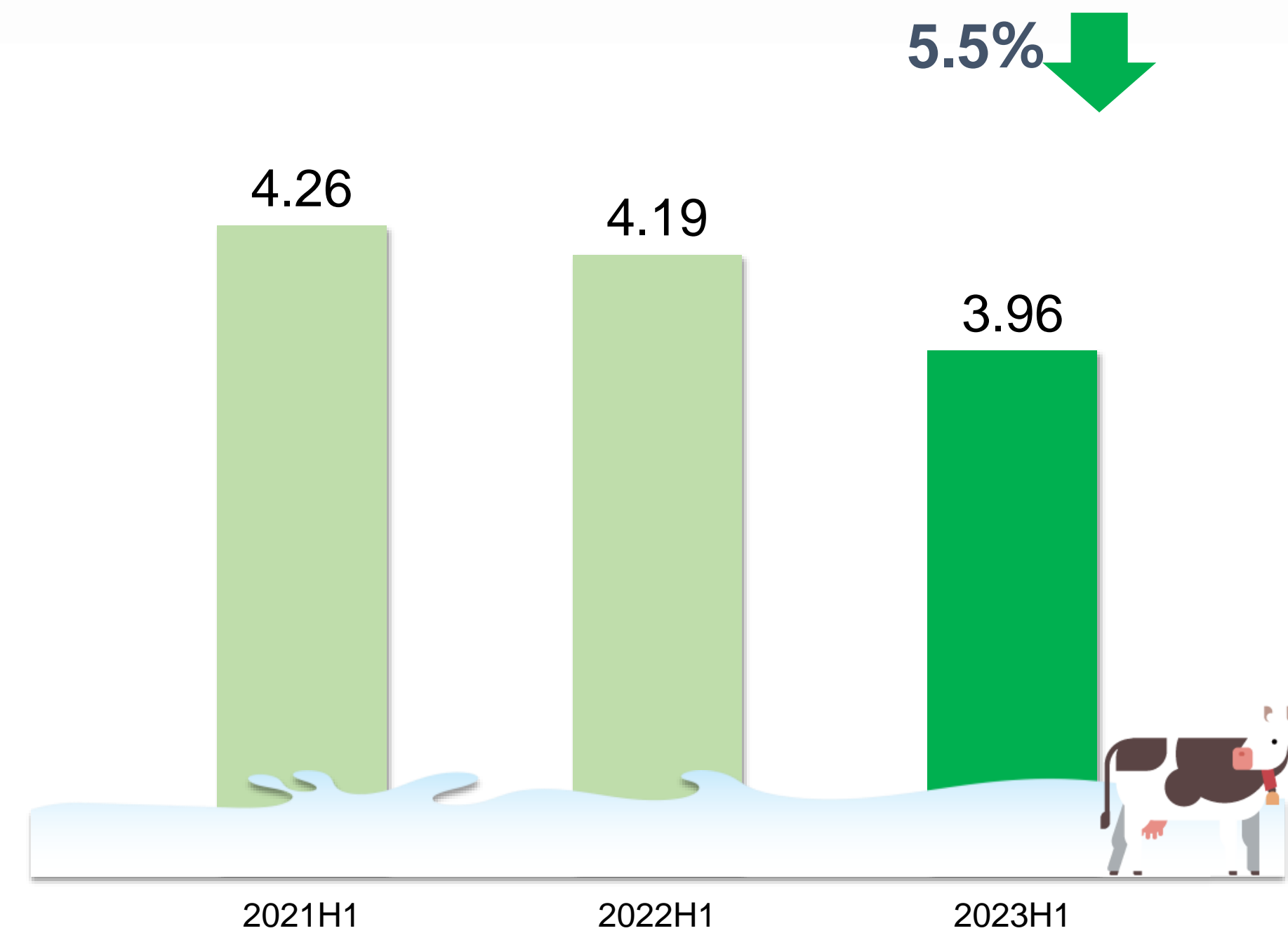
Average Selling Price (ASP) of Raw Milk

Company ASP (yuan/kg)



► Note: the milk price in 2021 is simulated after consolidating data from the acquired ranches for the same period

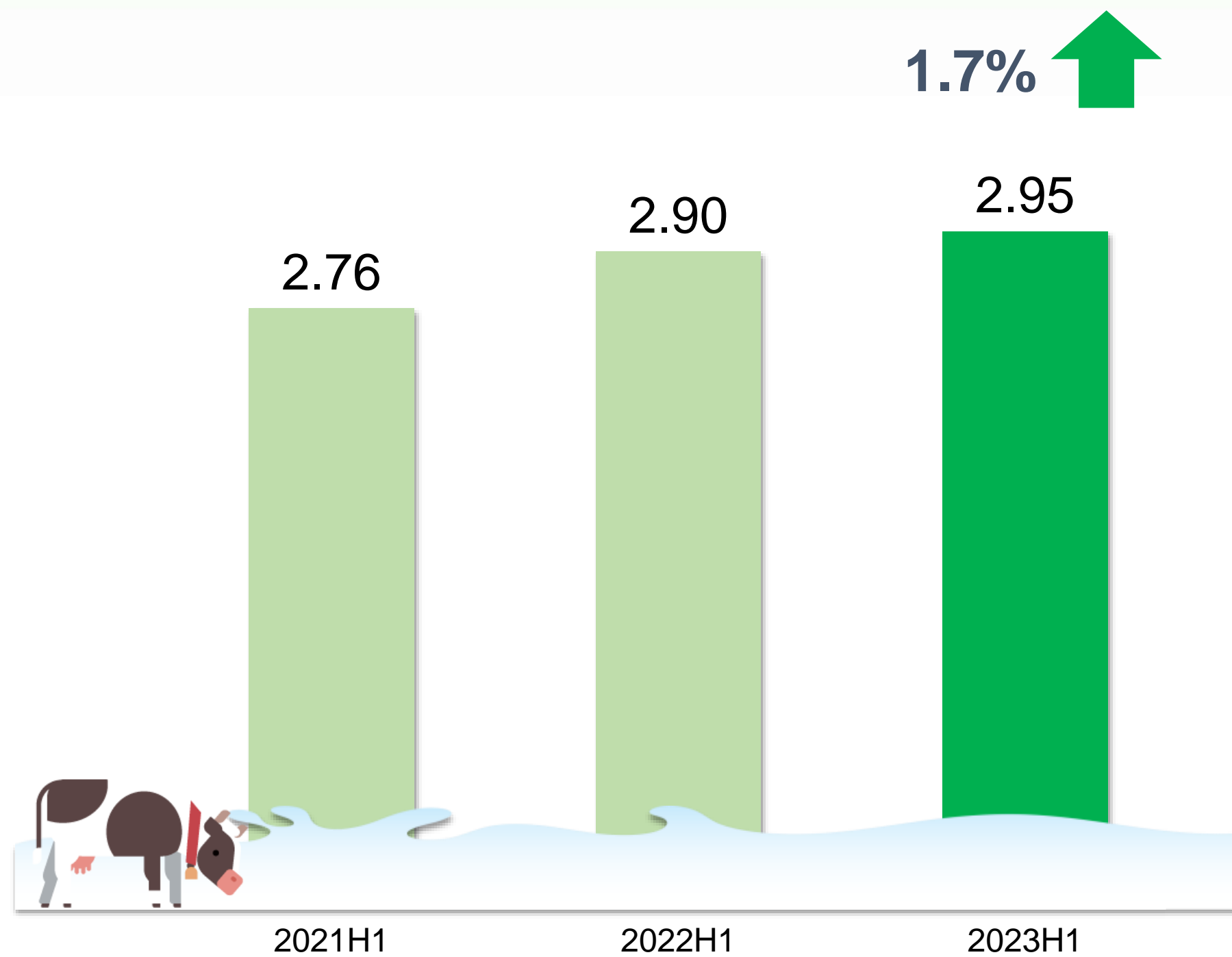
Market ASP (yuan/kg)



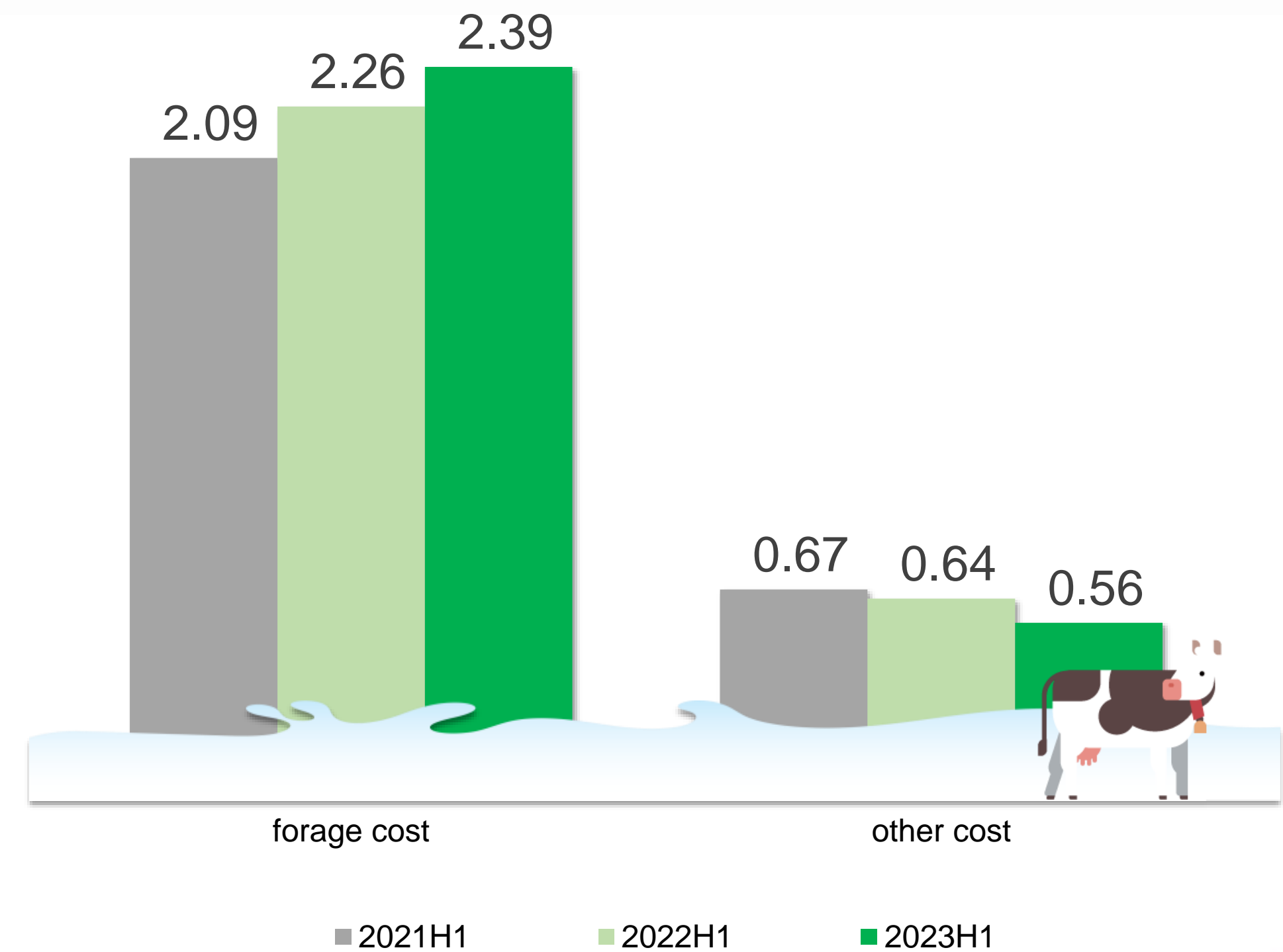
► Data source: Ministry of Agriculture and Rural Affairs

COGS per Kilogram

COGS (yuan/kg)



COGS Breakdown (yuan/kg)

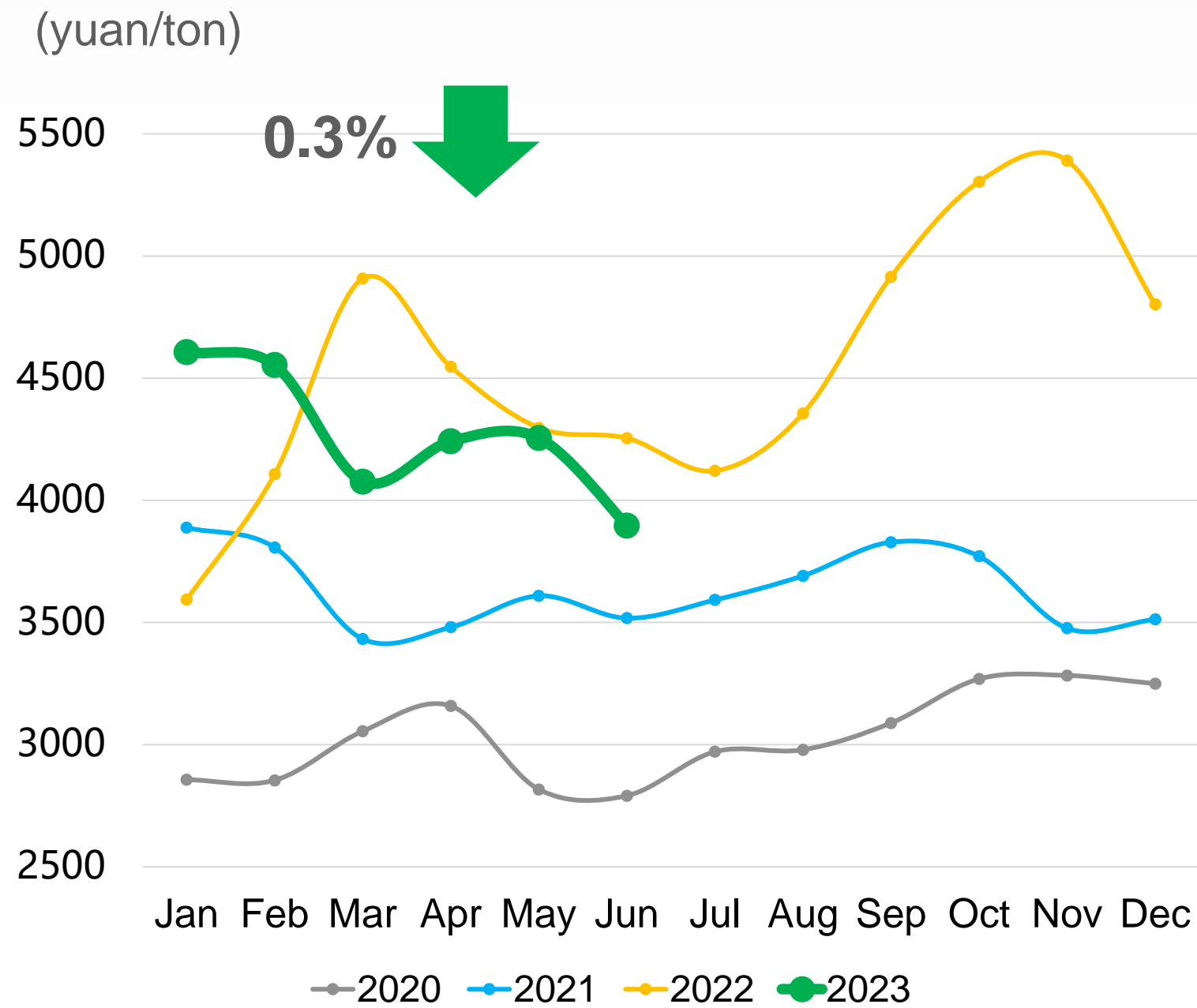


► Note: the milk cost in 2021 is simulated after consolidating data from the acquired ranches for the same period

Forage Price at High Level

Soybean Meals Price

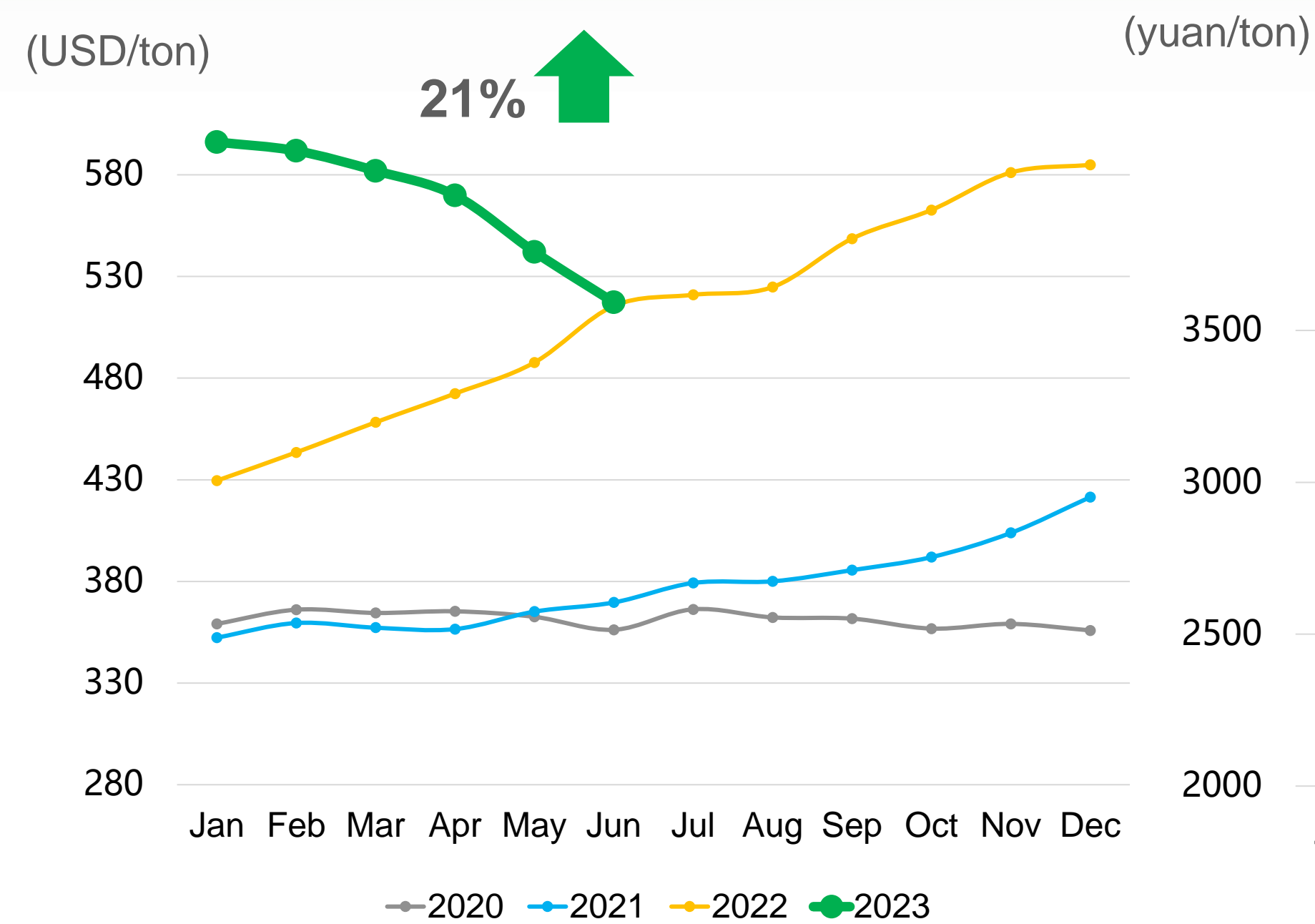
Source: Wind financial terminal



► Soybean meals: From January to June this year, the price of soybean meals was virtually flat YoY. Although the price rebounded in April and May, such rebound was unsustainable.

CIF Price of Imported Alfalfa

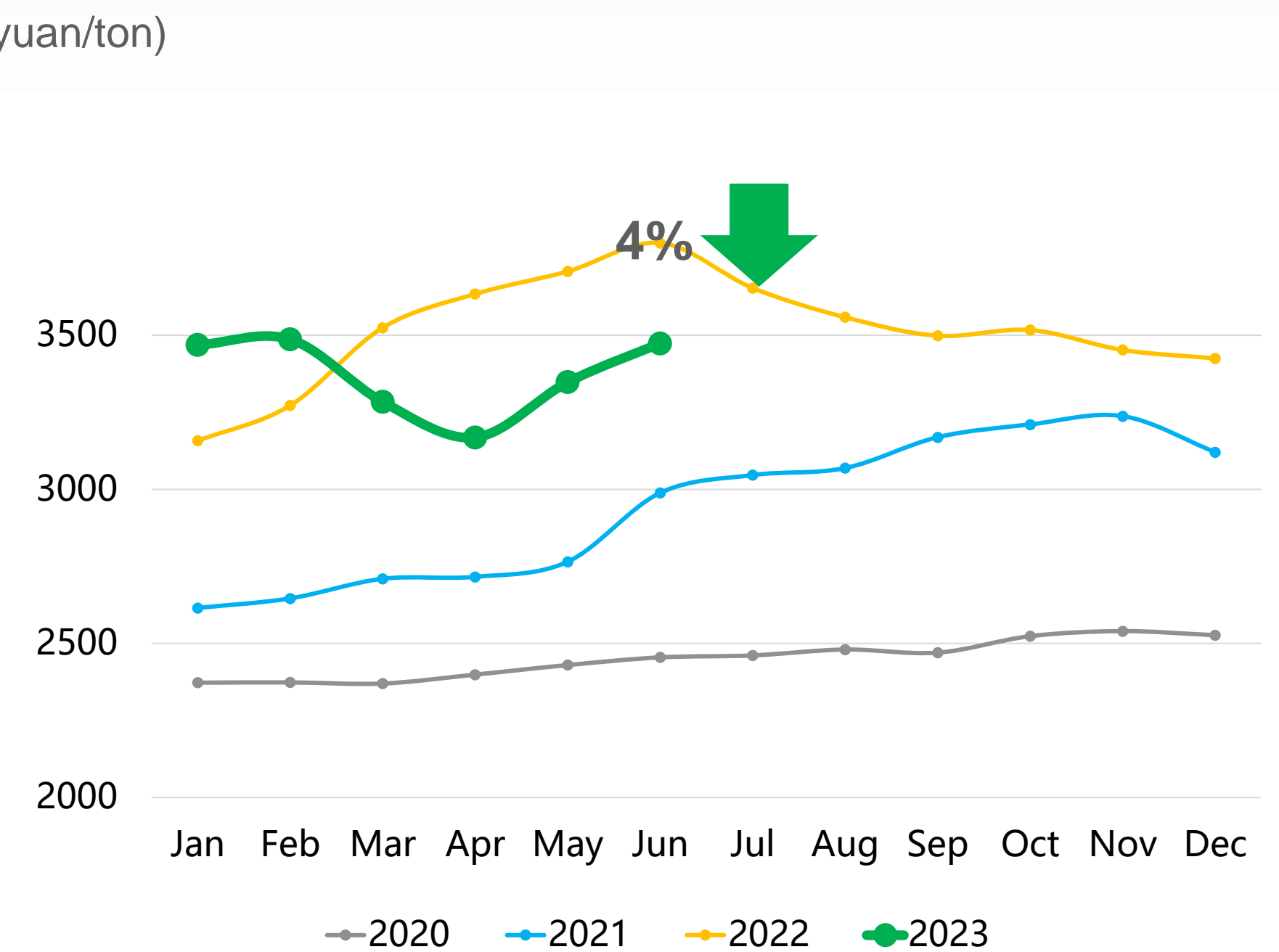
Source: China Customs



► Alfalfa: The price of Alfalfa decreased month by month but increased by 21% YoY in the first half of 2023

Cottonseed Price

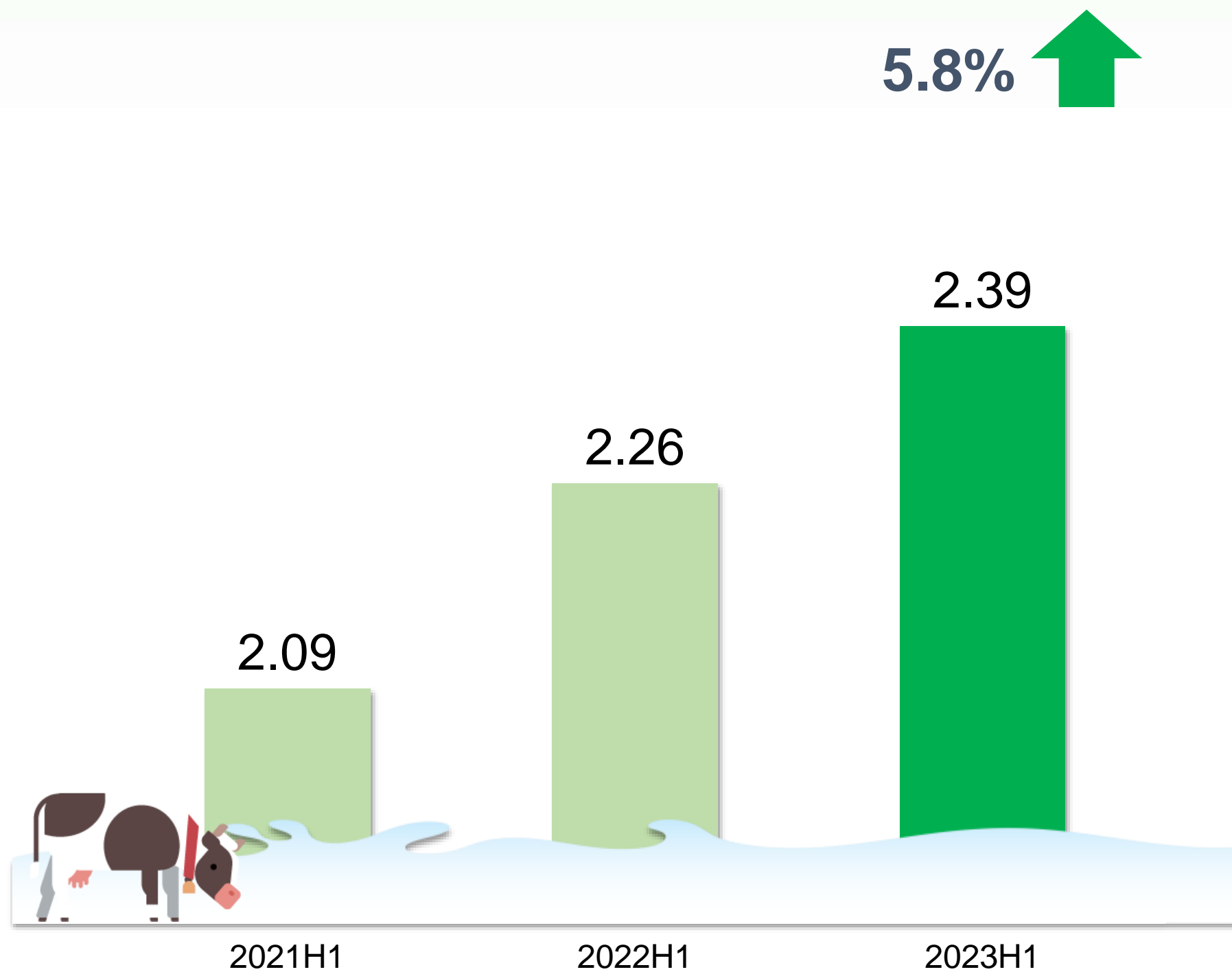
Source: Wind financial terminal



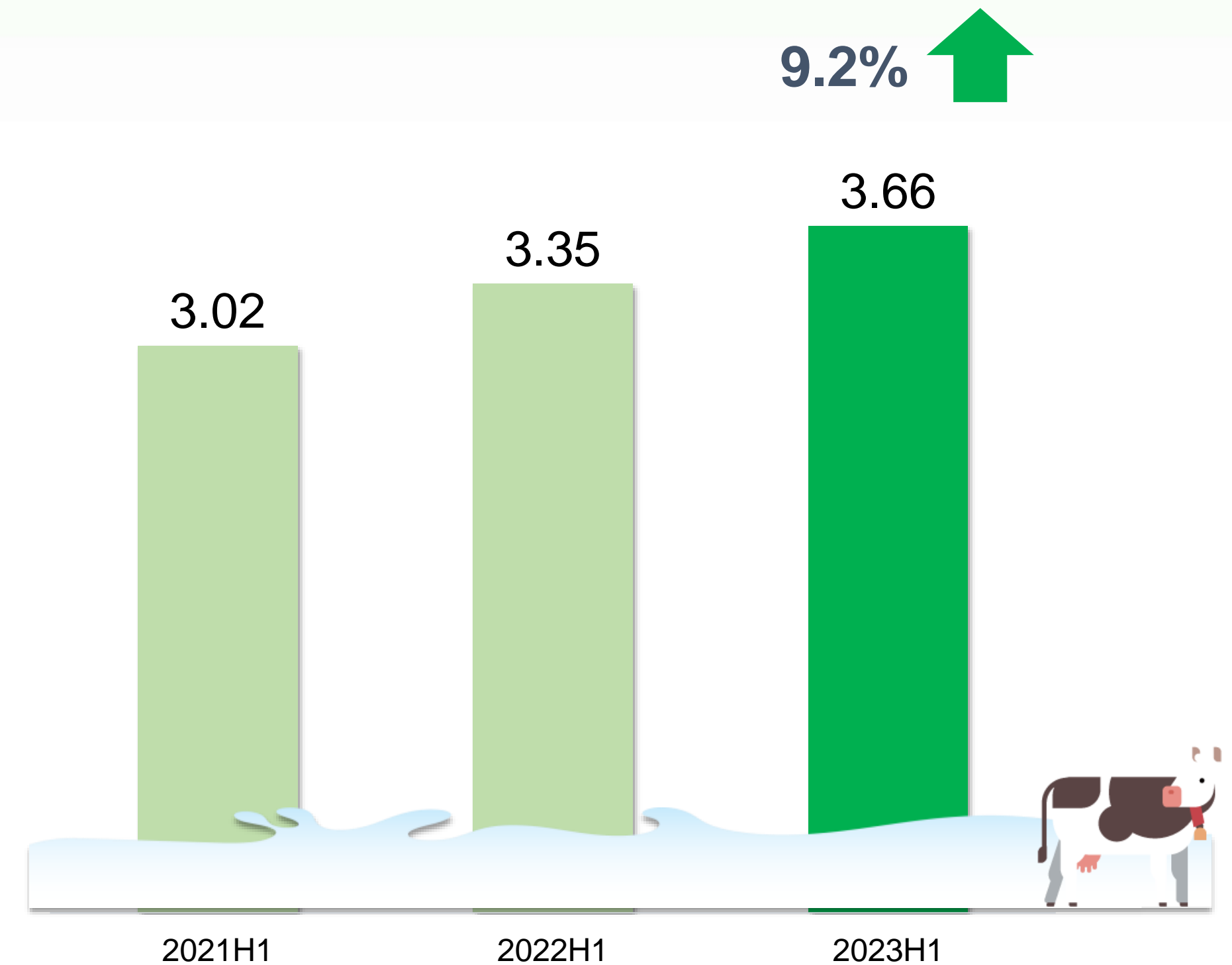
► Cottonseed: From January to June this year, the price of cottonseed decreased by 4% YoY

Feed Cost per Kilogram of Milk

Feed Cost(yuan/kg of milk)



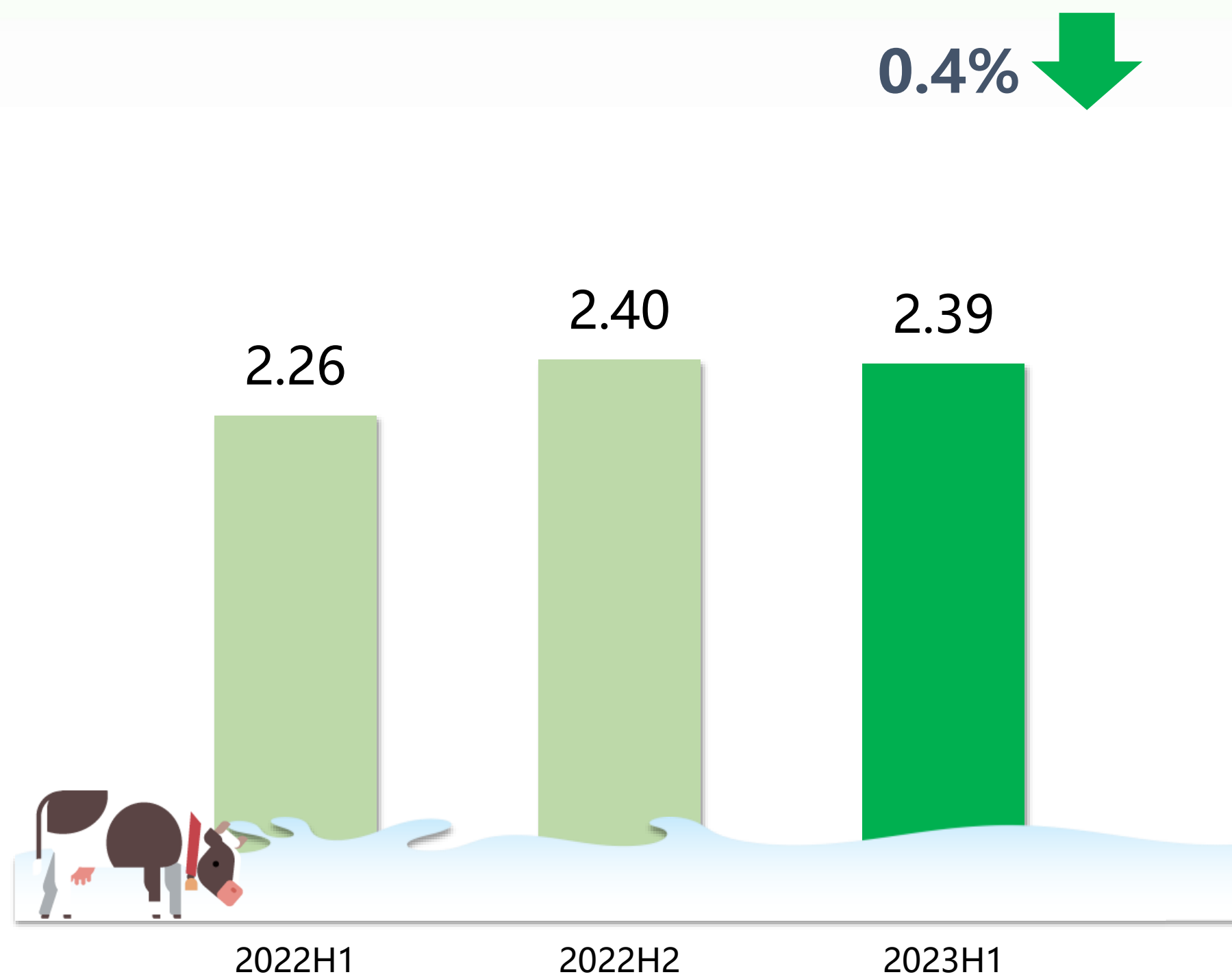
Forage Comprehensive Procurement Price(yuan/kg of feed)



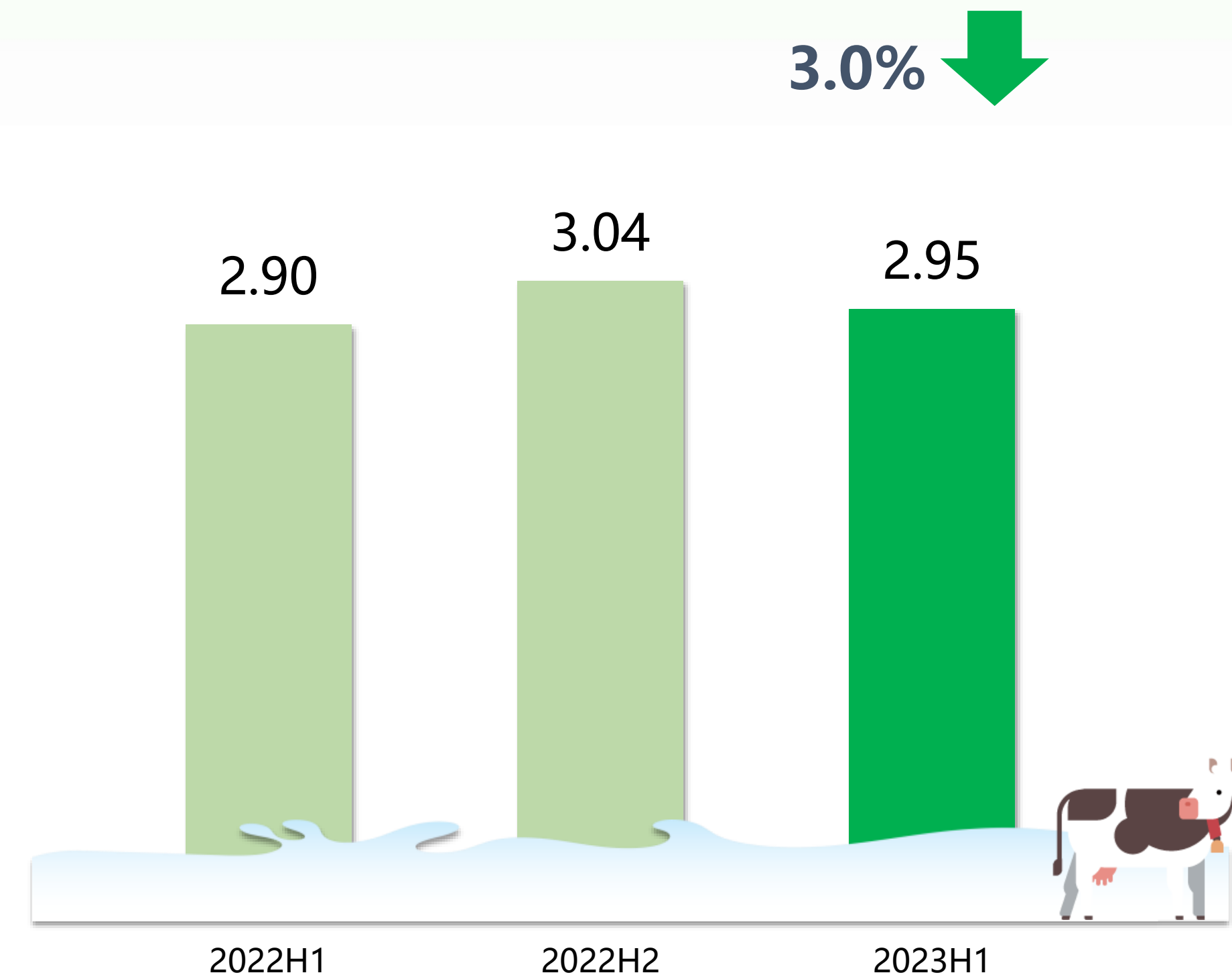
► Note: The feed cost in 2021 is simulated after consolidating data from the acquired ranches for the same period

Costs are improving MoM

\$ Feed Cost(yuan/kg of milk)

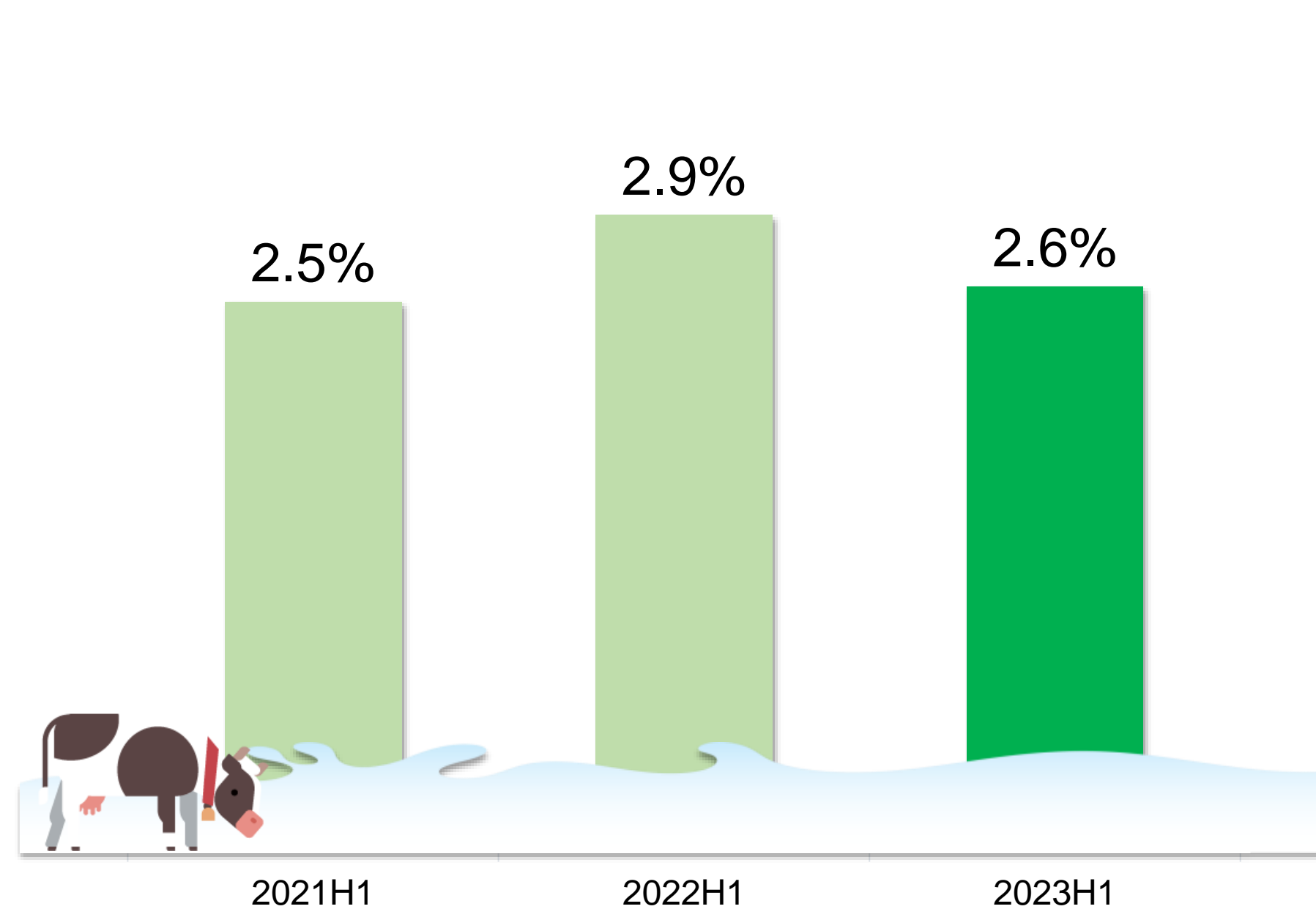


\$ COGS (yuan/kg)



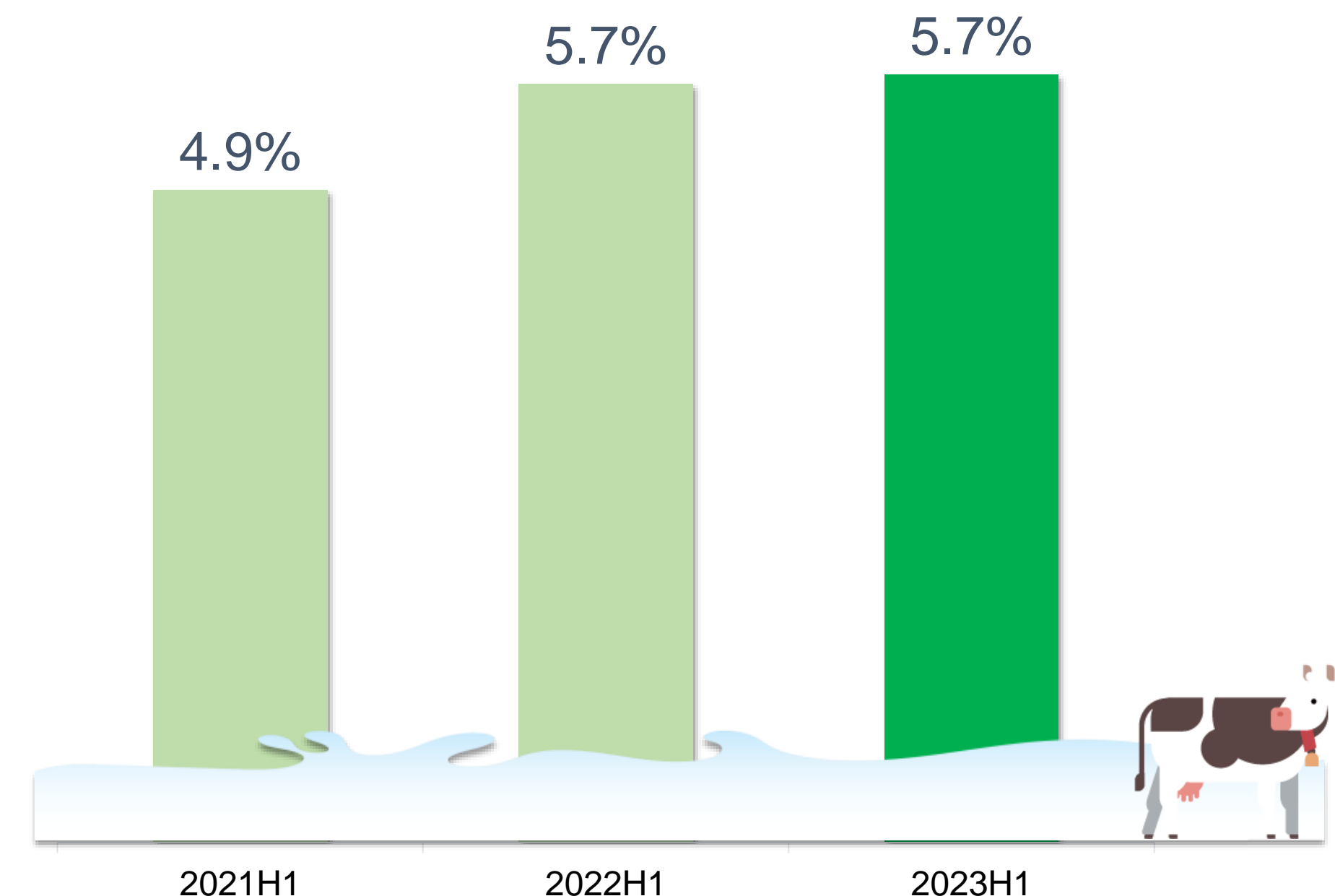
Selling and Administrative Expenses Ratios

Selling expenses ratio



- ▶ The selling expenses ratio in 2021 is simulated after consolidating data from the acquired ranches for the same period
- ▶ Selling expenses ratio = selling and distribution expenses/sales revenue

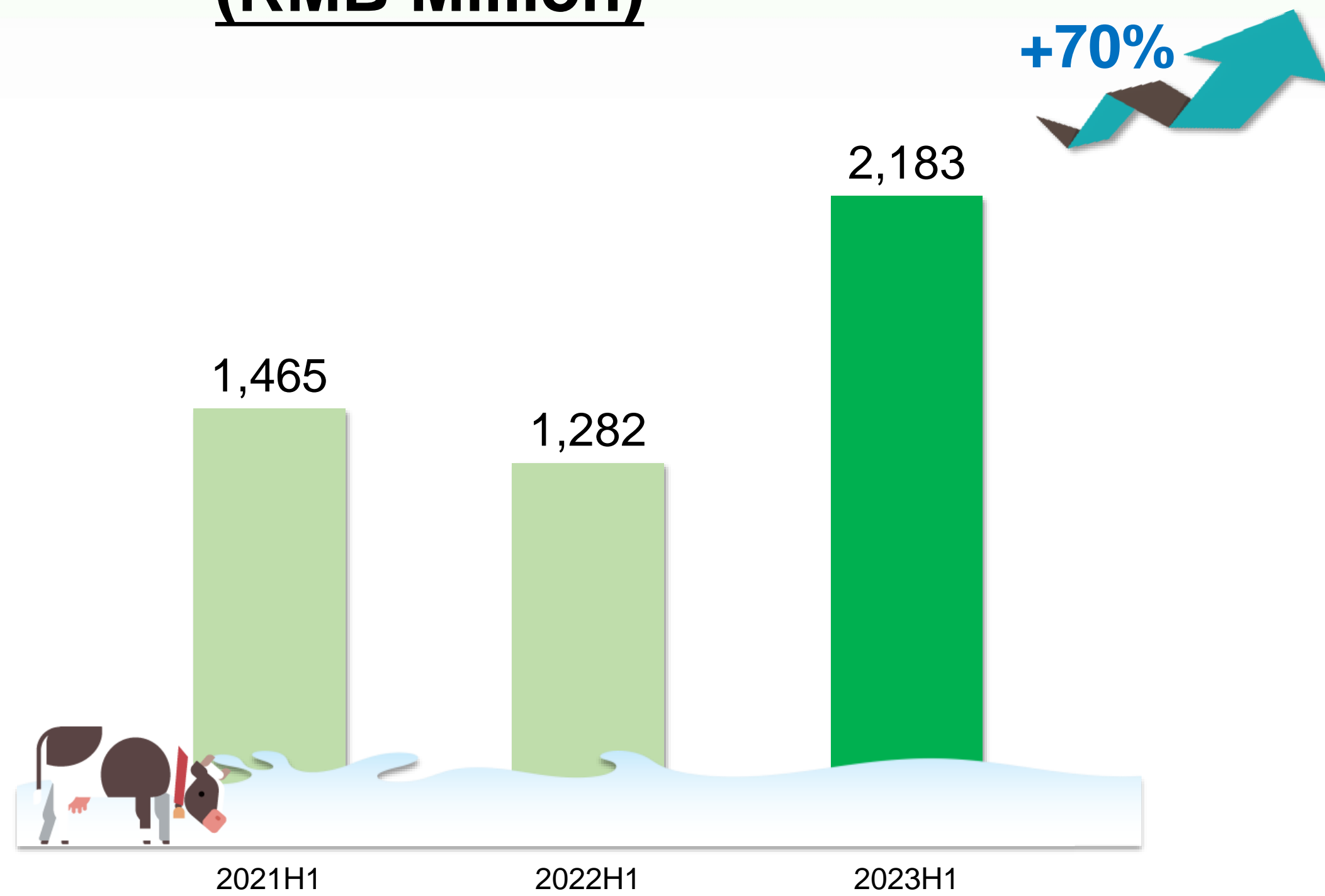
Administrative expenses ratio



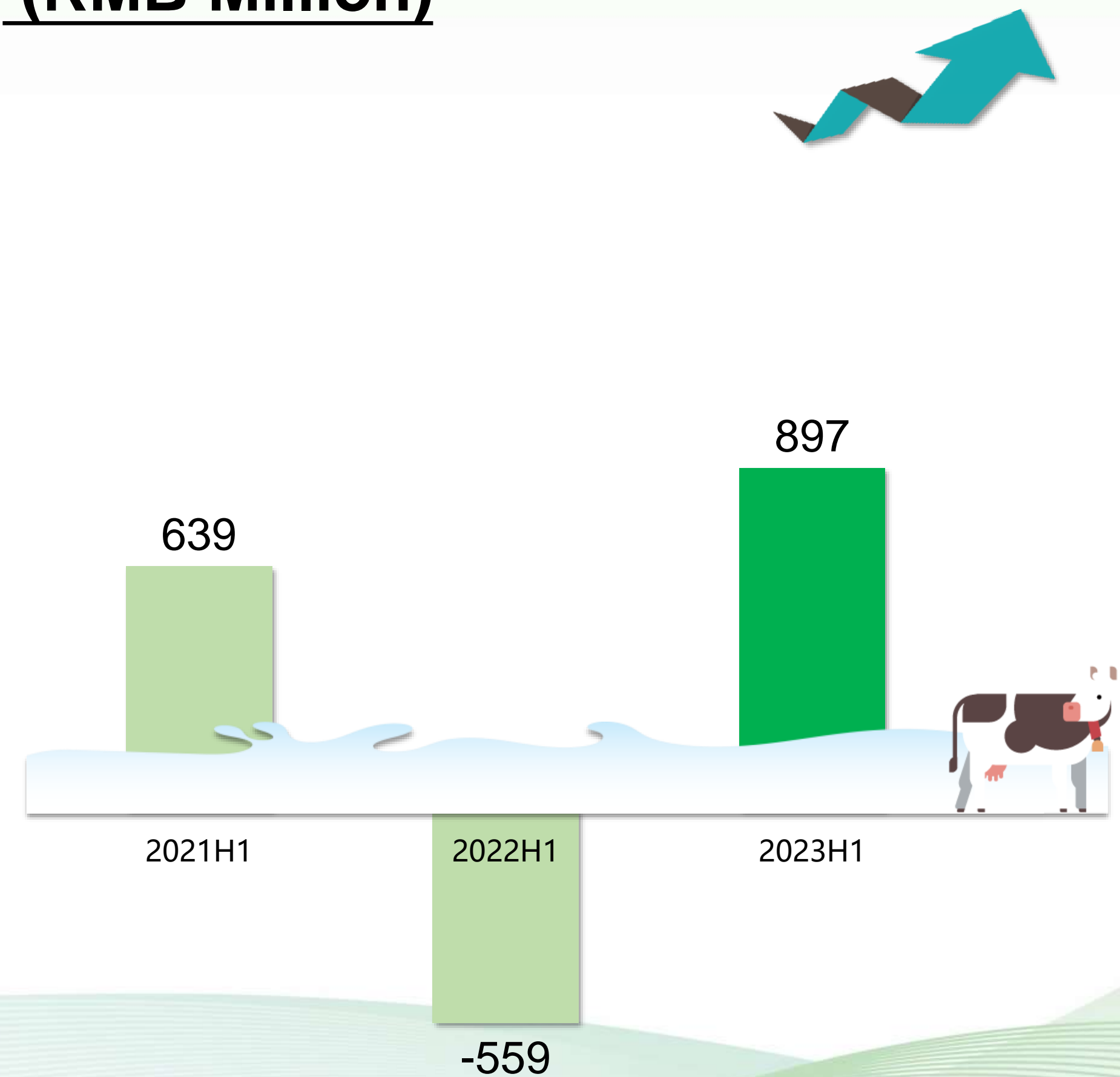
- ▶ The administrative expenses ratio in 2021 is simulated after consolidating data from the acquired ranches for the same period
- ▶ Administrative expenses ratio = administrative expenses/sales revenue

Significant Increase in Cash Flow

\$ Net cash from operations
(RMB Million)



\$ Free cash flow
(RMB Million)



Balance Sheet Overview

RMB: 100 Million	2023H1	2022	Change
Biological Assets	112.1	106.3	+5%
Fixed Assets	57.8	57.0	+1%
Total Assets	290.9	288.2	+1%
Total Liabilities	173.1	171.8	+1%
Total Equity	117.8	116.4	+1%
Net Asset Value per Share ⁽¹⁾ (RMB yuan)	1.44	1.42	+1%
Total Interest-bearing Borrowings	123.5	124.7	-1%
Net Interest-bearing Borrowings⁽²⁾	95.0	99.2	-4%
Net Interest-bearing Debt Ratio ⁽³⁾ (%)	44.6	46.0	-1.4 ppt
Debt-to-asset Ratio ⁽⁴⁾ (%)	59.5	59.6	-0.1 ppt

Notes:

(1) Net Asset Value per Share = Equity Attributable to Owners of the Company/ Year-end Number of Shares Outstanding;

(2) Net Interest-bearing Borrowings = Interest-bearing borrowings - cash and deposit assets;

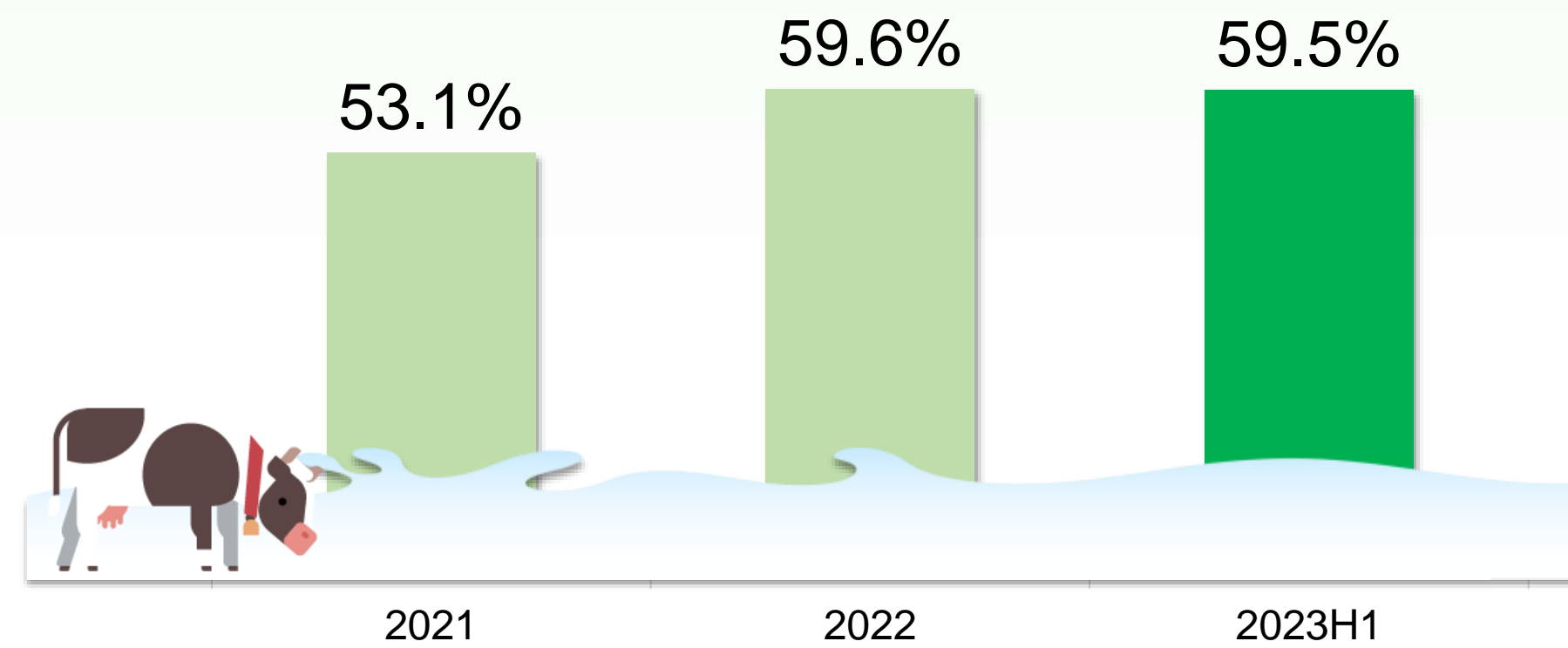
(3) Net Interest-bearing Debt Ratio = Net Interest-bearing Borrowings / (Net Interest-bearing Borrowings + Equity);

(4) Debt-to-asset Ratio = Total Liabilities/Total Assets.

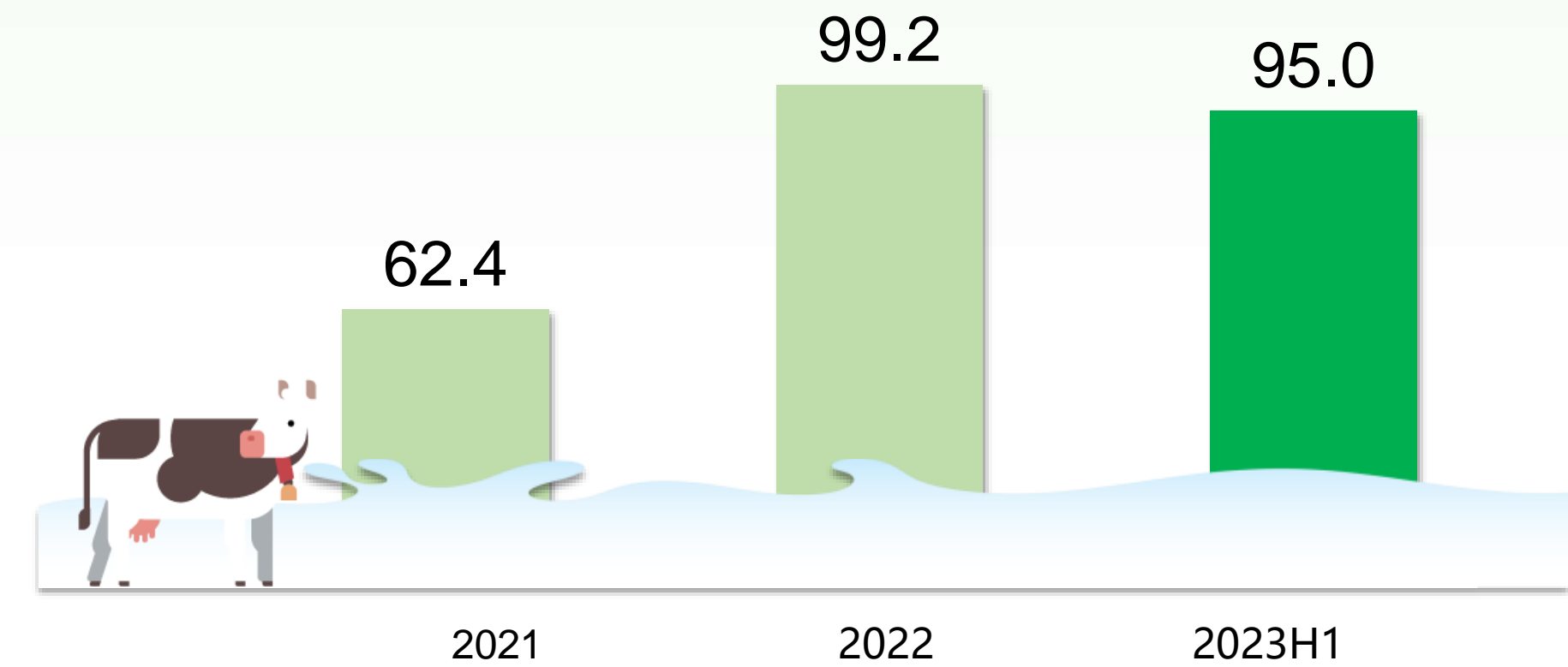
Financial Leverage



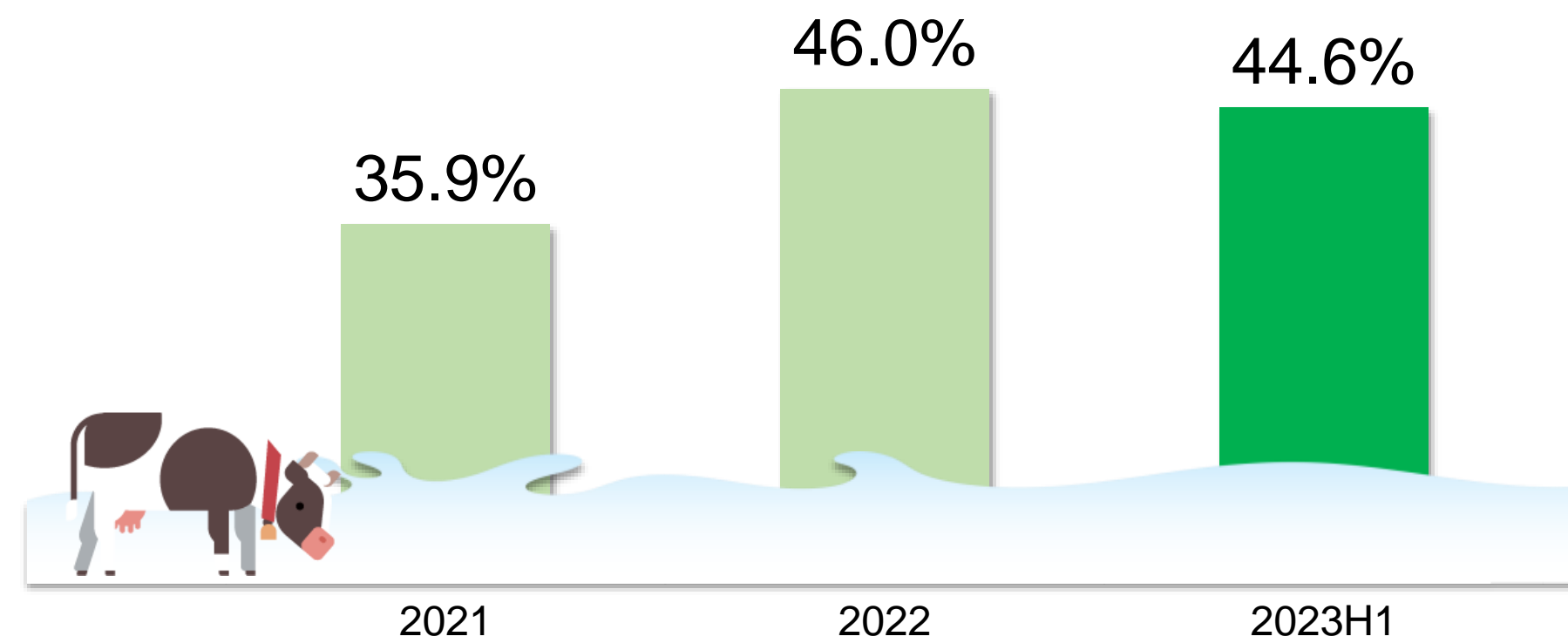
Debt-to-asset Ratio (%)



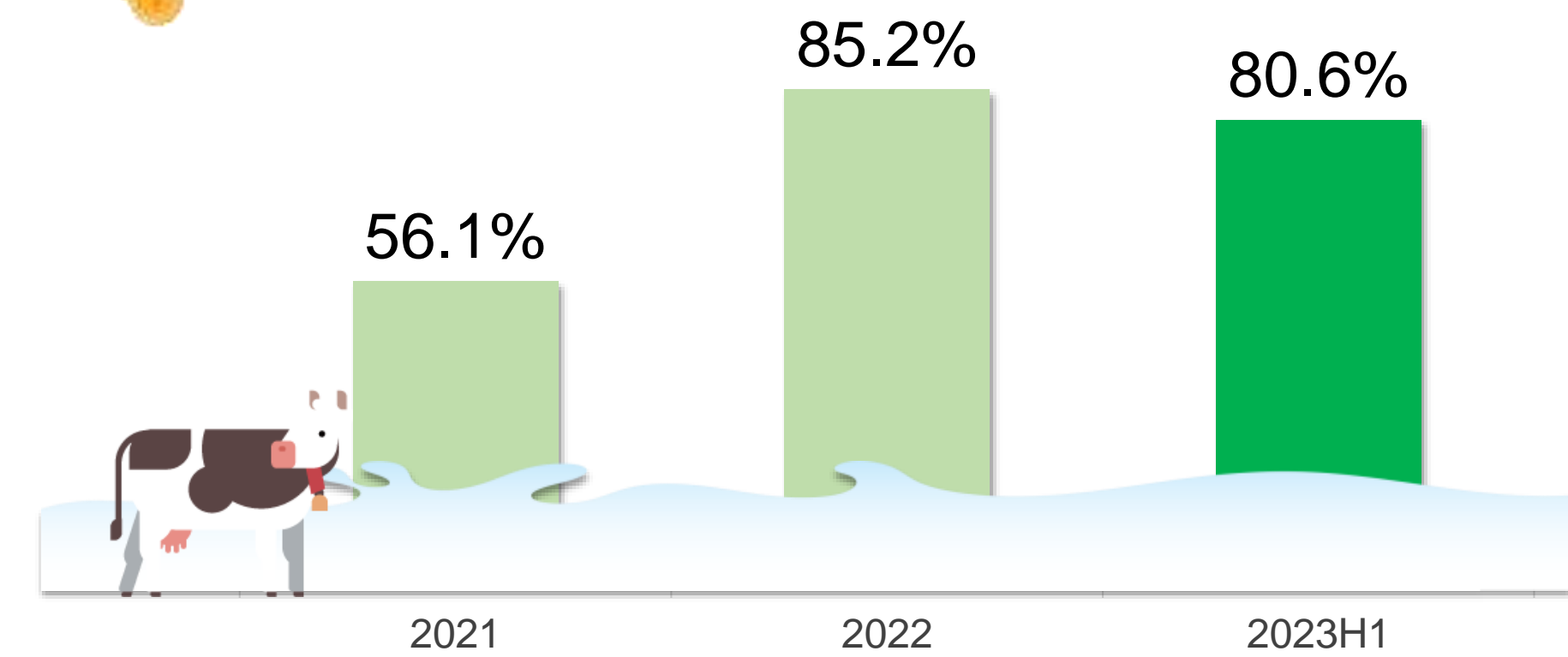
Net Interest-bearing Debts (00 million yuan)



Net Interest-bearing Debt Ratio (%)

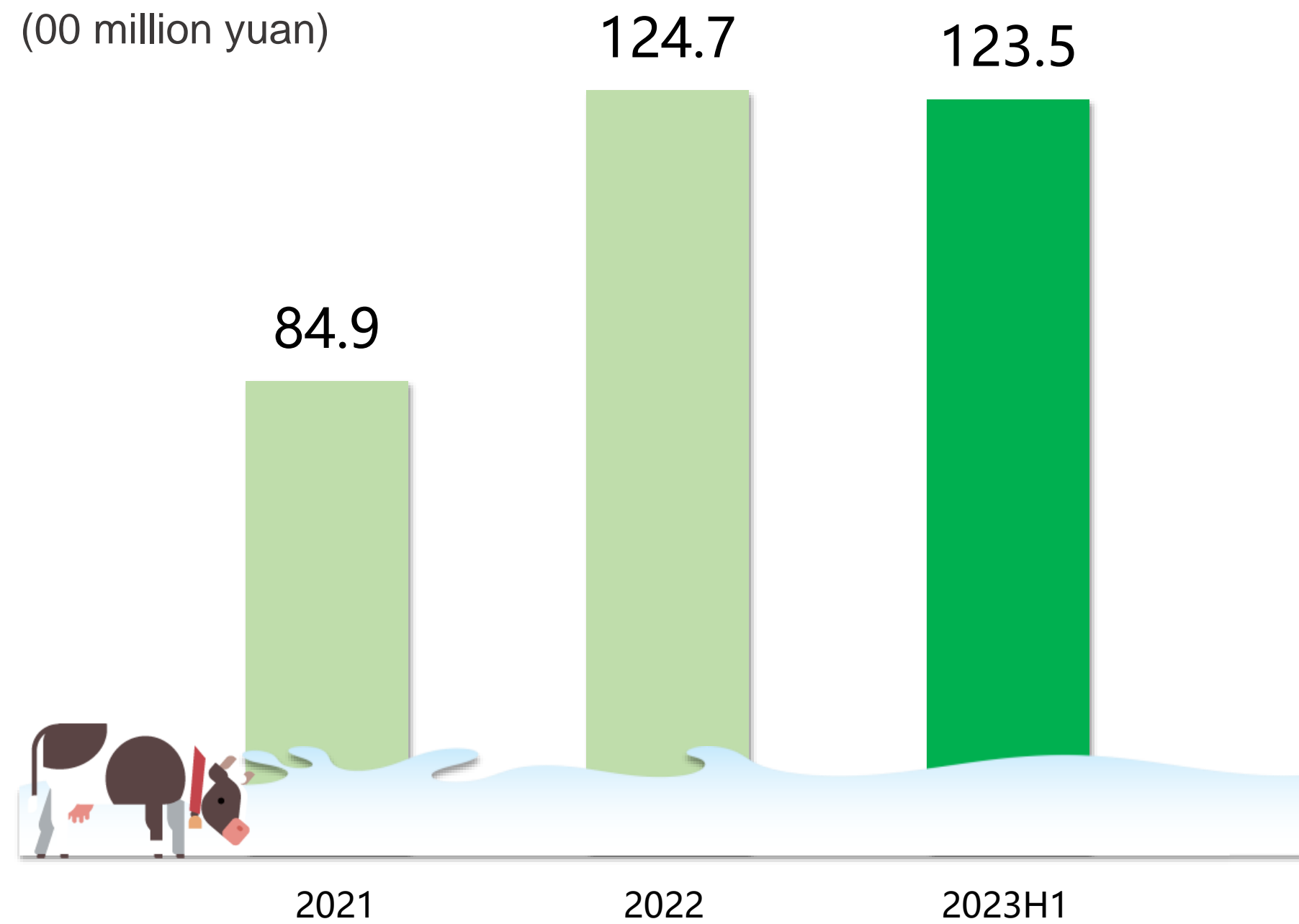


Net Gearing Ratio (%)

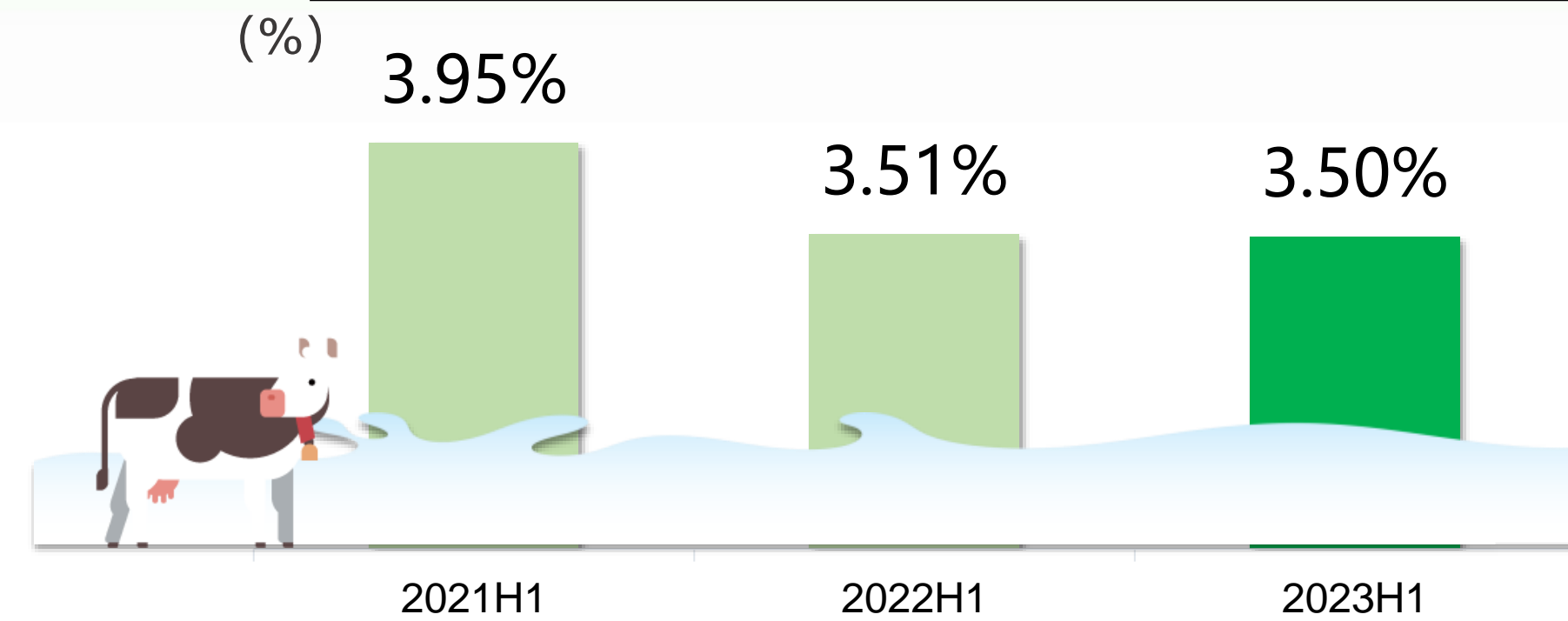


Optimization of Interest-bearing Debt

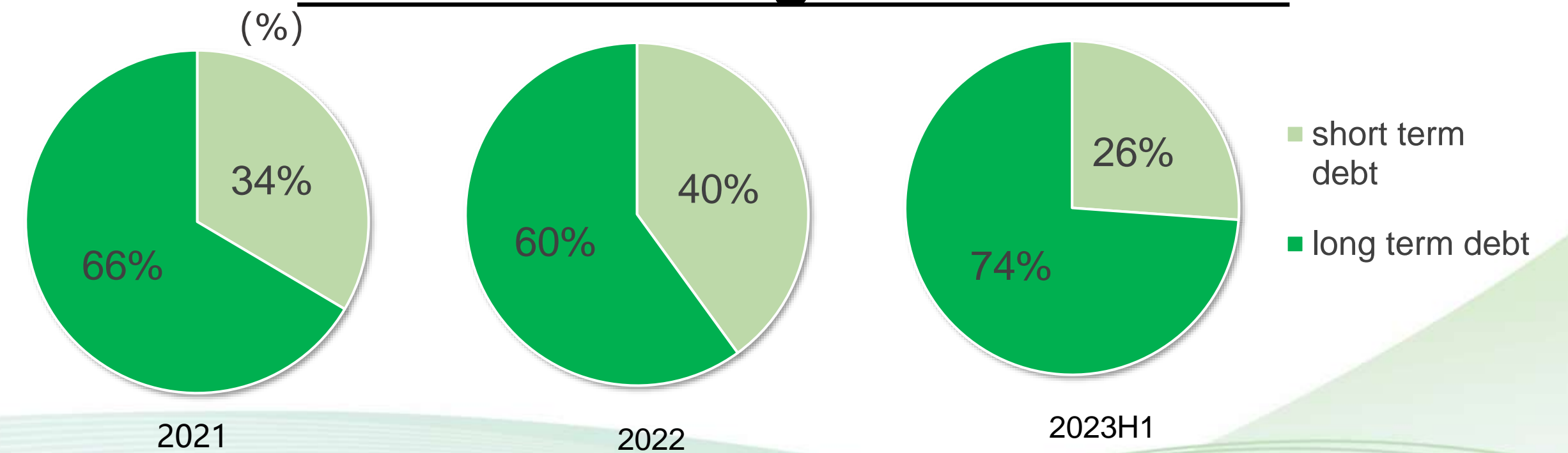
Scale of interest-bearing debt declined steadily



Steady decline in finance rate



Significant optimization of interest-bearing debt structure



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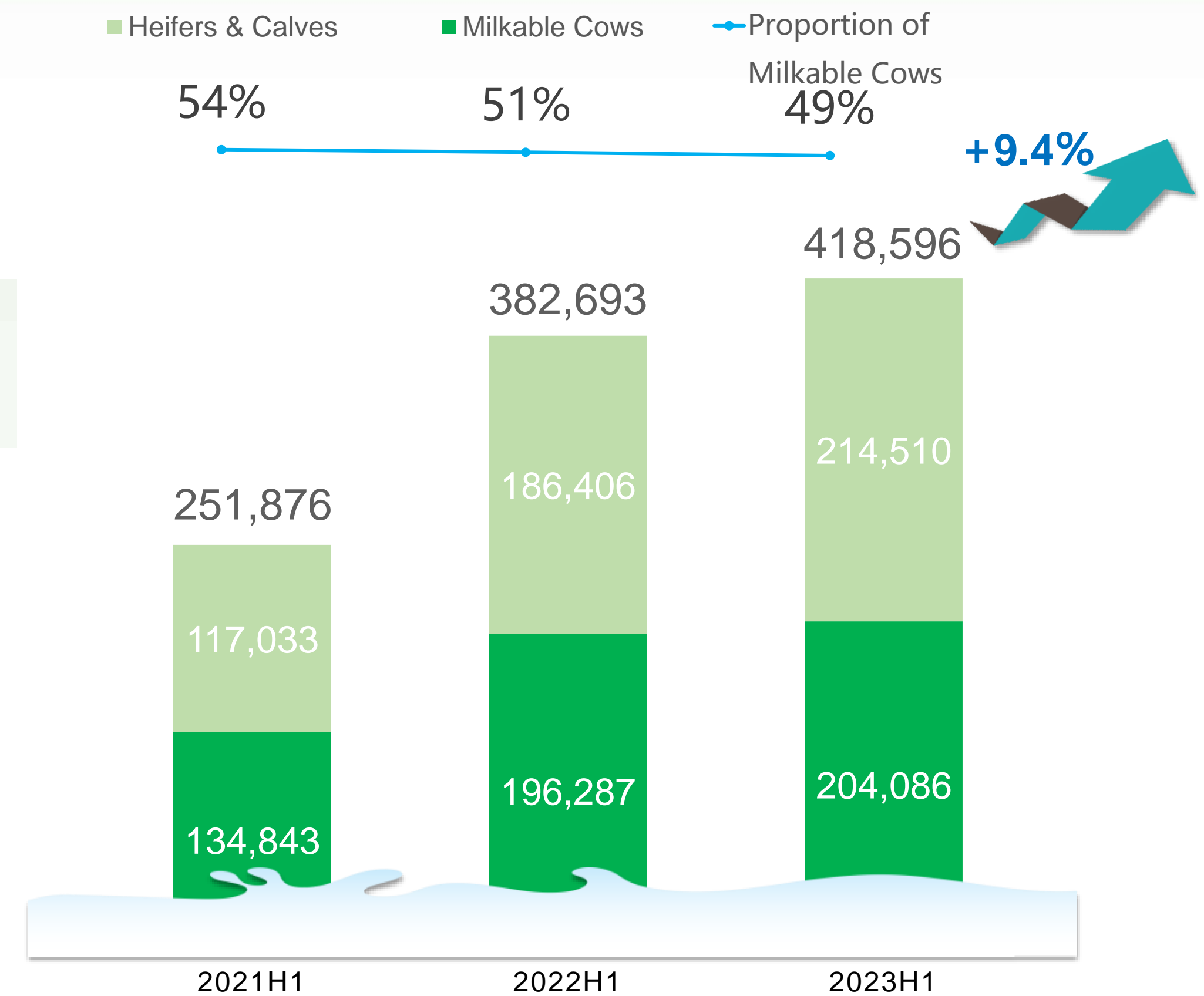
Industry Prospects



Farm Map and Herd Size



Herd Size & Growth Rate



As of June 2023, the Group had invested and established 42 dairy farming companies in PRC, and the herd size reached nearly 420 thousand heads, covering 14 provinces and autonomous regions.

Five New Businesses Make Breakthrough Against the Trend



Liangyuan Technology

Sales in 1H of the year reached
RMB1.1 billion
An increase of more than 30%
year on year
Leading the industry



Aiyangniu

Sales in 1H of the year reached
RMB500 million
An increase of more than 50%
year on year
**Ranking 1st in domestic milk
industry chain platforms**



Modern Grassland

Create **"Farm and Grass
Plantation Cooperation Model of
Modern Grassland"**
Actual control of land resources
of more than 110,000 acres
"Modern Grassland" brand
forage enters market

Modern Feed

Cumulative sales of 213,000 tons
in 1H of the year
Single-month sales up to 40,000
tons
An increase of 6 times year on
year
**Rank 2nd in the dairy cow feed
industry in China**



Meng Yuan Genetics

Cumulative sales of frozen
semen in 1H of the year
exceeded 60,000
Self-developed "GenoBaits
Modern Bovine SNP Panel" cow
genome liquid microarray
**Filling the gap of
commercialized genomic
microarrays for domestic
milkable cows**

Forage Segment | Guaranteeing the Sustainable Development of Livestock Industry



Liangyuan Technology



Main products include feed ingredients, feed additives, premixes, imported forages, etc.

Own **5** production plants, **1** feed mill and **4** tablet plants in China

Full coverage of services in Northwest China, North China, East China and other major domestic raw milk production areas



Haykingdom



3 plants across the West Coast of the United States

Produce customized medium to high quality alfalfa grass

Global customer reach, exporting **250,000** tons of forage annually



Modern Grassland



Crops include corn silage, alfalfa grass, oat grass and various types of straw

1 forage demonstration park and over **110,000** acres of land resources

Establish a feed breeding company and **3** breeding bases

Establish **5** standardized forage processing plants, with **14** production lines and an annual supply of over **200,000** tons of processed forage

By comprehensive management of saline land, both the demand for forage in aquaculture and the **green circular development** are achieved



Modern Feed

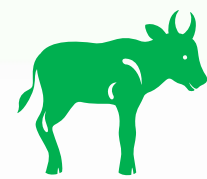
High degree of integration of personnel from milk sources, COFCO factories and Modern Feed

Establish **100** core customer groups within 1-2 years



Digital platform | Transparent Procurement of Farm Supplies

Aiyangniu



100,000 imported dairy cows
6000 imported embryo (USA)



52,000 tons of imported alfalfa grass, priced at **RMB50/ton** lower than competing products

20,000 tons sugar beet meal, at **RMB 400/ton** lower than current market price



1500 units of major equipment
91% of overall funding for milking machine procurement



RMB1 billion supply chain finance lending
RMB470 million of credit
10 kinds of financial products

Yunyangniu



AIOT
Intelligent Solutions

Internet of Everything, accurate and efficient
Smart Ranch Management software + IOT hardware
Associating each key indicator

Digital Feeding

Correlation analysis with production data



IOT feeding equipment

Precision feeding system Calf feeding system
Intelligent weighing system

Digitalization of breeding and health care

Estrus & Disease alerts and Health monitoring



AIOT

Dairy digitization

Full central control Milk volume identification
Intelligent alarm Real-time traceability

Intelligent ranch management platform

Management platform collects, analyzes and makes decisions on the data of IOT devices

Barn digitization

Internet of Things data upload Online control



Cattle barn IOT equipment

AI precision spray
Intelligent environment control
Pusher robot Smart sink
Roller shutter system

Cattle IOT devices

Smart collar
Cattle sweeper

Milk hall IOT equipment

Temperature sensing
Concentration sensing
Flow monitoring
Intelligent early warning

Aiyangniu

- Platform transaction volume reaches **RMB21.7 billion** in 1H2023, an increase of **89%** year-on-year;
- Aiyangniu contributes revenue of approximately **RMB500 million** and net profit of **RMB20 million+** to the Group in 1H2023

Yunyangniu

- Smart Farm Management Platform: covered nearly **400** farms and over **900,000** heads, creating a networking and sharing platform
- Smart Collar: application of over **50,000** sets of product in farms, to be the digital translator for cows

Ecological Sustainable Development

Carry out the Emission Reduction Practices of Greenhouse Gas with Continuous Reduction of Carbon Emission Intensity

In 2022, the annual power generation of biomass biogas was 124 million kWh, realising emission reduction of 70,000 tons by replacing fossil energy with biomass biogas.

Carry out the complementary strategic cooperation between farming and photovoltaic with third parties, and plan to lay 2 million m² of photovoltaic panels with an installed capacity of 500MW, and an annual green power generation of 600 million kWh.

Use new energy milk trucks to achieve low-carbon transportation of raw milk.



Social Sustainable Development: Implement ESG Concept

The manure resource utilization system of Modern Farming has been selected in the Report of the United Nations Global Compact Organization as an excellent case of low-carbon emission reduction

2023 S&P CSA's total score increased by 71%, 64% higher than the industry average score

企业“碳中和”目标设定、行动及全球合作
——践行全球发展倡议，加速2030年可持续发展议程






4. 企业气候行动与全球合作

4.1 农业食品业

民以食为天，食品行业对于维系人类健康和福祉必不可少。农业相关环节奠定了整个食品行业的基础。森林和土地利用是农业食品业的一大排放源，且随着人口增长和饮食结构向肉类倾斜，未来几十年全球食品消费增速预计将高达70%（欧洲环境署，2015）。农业食品业面临满足人口增长所需和推动行业减排的两难困境。

企业在价值链上所处的位置通常决定了其主要排放源。有的企业自主经营农场（如养殖牲畜、种植农作物），其排放主要来自土地利用和养殖活动（占其排放总量的60%以上）；有的企业为食品生产商，需向供应商或农业承包商采购原料，约90%的排放来自原料采购、包装和物流等范围三活动。

全球领先的农业食品企业从四个方向出发，向碳中和目标迈进。

1. 内部运营环节减排

生产环节是大多数农业食品企业能够直接施加影响和控制的环节，因此通常是碳中和道路的起点。

- **采用可再生能源：**相较于化石能源，可再生能源排放接近于零，是减少范围一和范围二排放的主力军。粪便管理产生的甲烷排放是农业食品业的一大排放源，因此甲烷回收在农业食品公司扩大可再生能源利用的行动中扮演重要角色。现代牧业是中国首批采用粪污厌氧发酵处理设施的公司。该设施的甲烷排放量比液体贮存、固体贮存和堆肥等传统系统低40%以上，大部分甲烷以沼气的形式回收利用，替代化石能源。2021年，沼气占现代牧业能耗总量的60%，减少因煤炭燃烧产生的温室气体排放29万吨（现代牧业，2022）。此外，企业可通过在自有厂房部署太阳能光伏板、用生物燃料替代化石燃料或与可再生能源供应商签署购电协议等手段，进一步扩大可再生能源利用。2021年，中国龙头乳业公司蒙牛集团利用厂房已建设运营太阳能光伏发电装机容量规模达到15兆瓦，年度发电8,698,000千瓦时。此外，蒙牛利用污水厂厌氧产生的沼气及可燃烧的生物质颗粒作为锅炉燃烧介质，代替天然气制产蒸汽热力供给生产需要，年产蒸汽量约29万吨。截至2021年底，蒙牛可再生能源已达年能耗总量的10%，实现年减排二氧化碳约8万吨（蒙牛集团，2022）。

China Modern Dairy Holdings Ltd. ESG Score

TICKER: 1117 Industry: FOA Food Products Location: People's Republic of China

ESG Score Result

36

China Modern Dairy Hldgs Ltd | Industry Best | Industry Mean

Environmental



Social

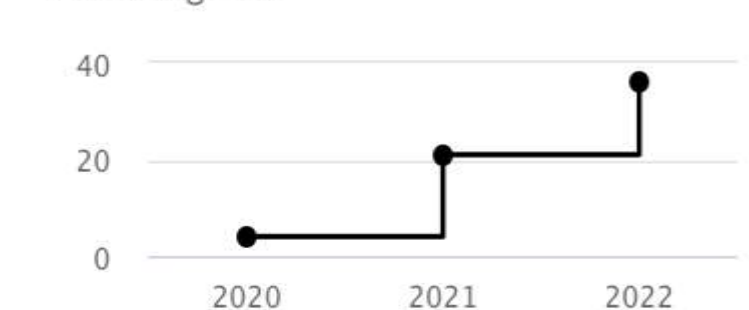


Governance & Economic



Score History

Y/Y Change: 15



Last Updated: February 17, 2023. Updated annually or in response to major developments.

Data Availability: ■ Medium

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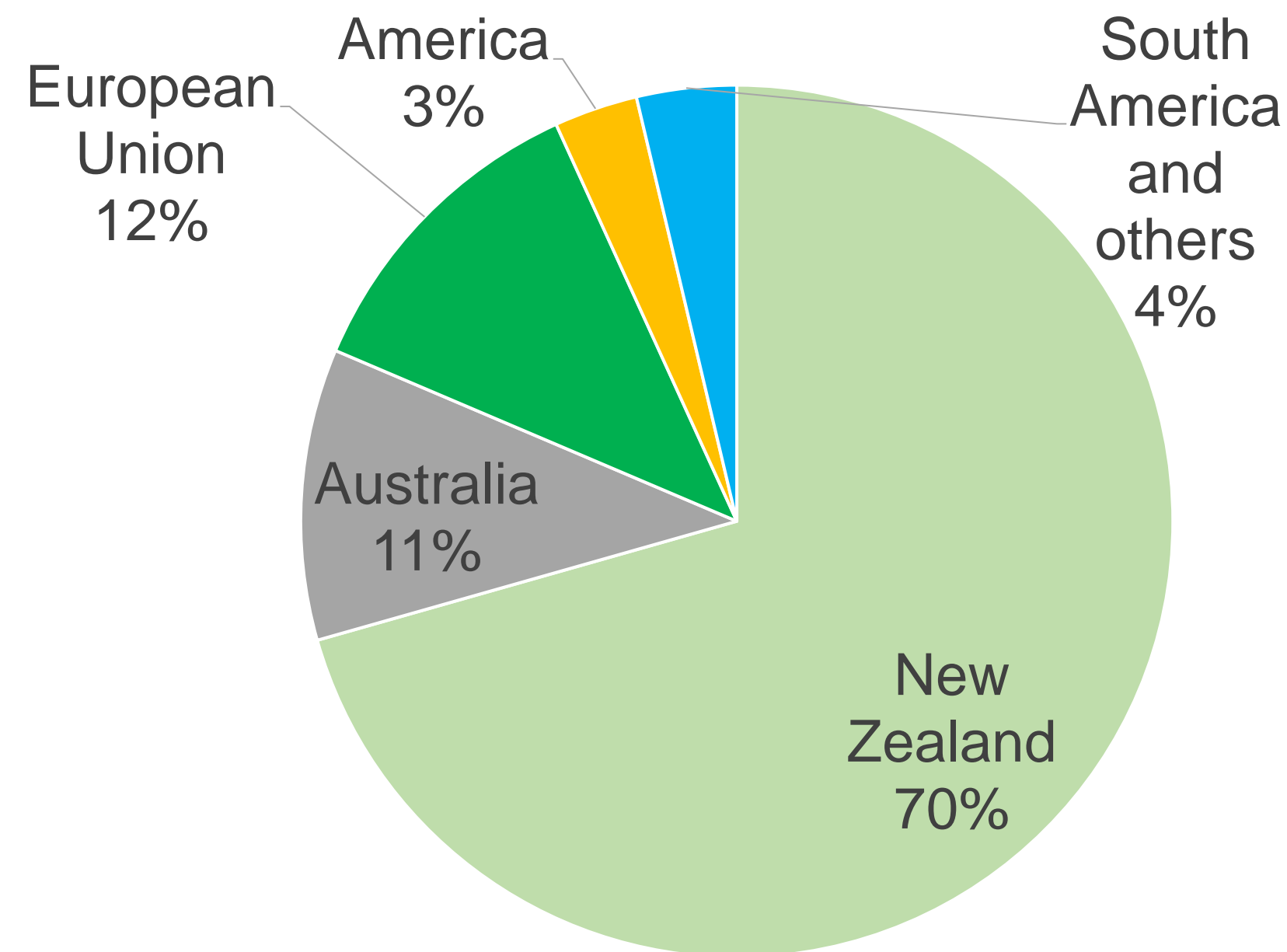
International Raw Milk Production

In 1H2023, China's milk powder mainly came from New Zealand, followed by the European Union, Australia, and the United States. Rabobank predicted international raw milk production would experience **a slight growth** from 4Q2022 after the decline of five quarters (compared to weaker comparable data), and international raw milk production would increase by **0.5%** year on year in 2023, lower than expected, providing support for international milk prices.



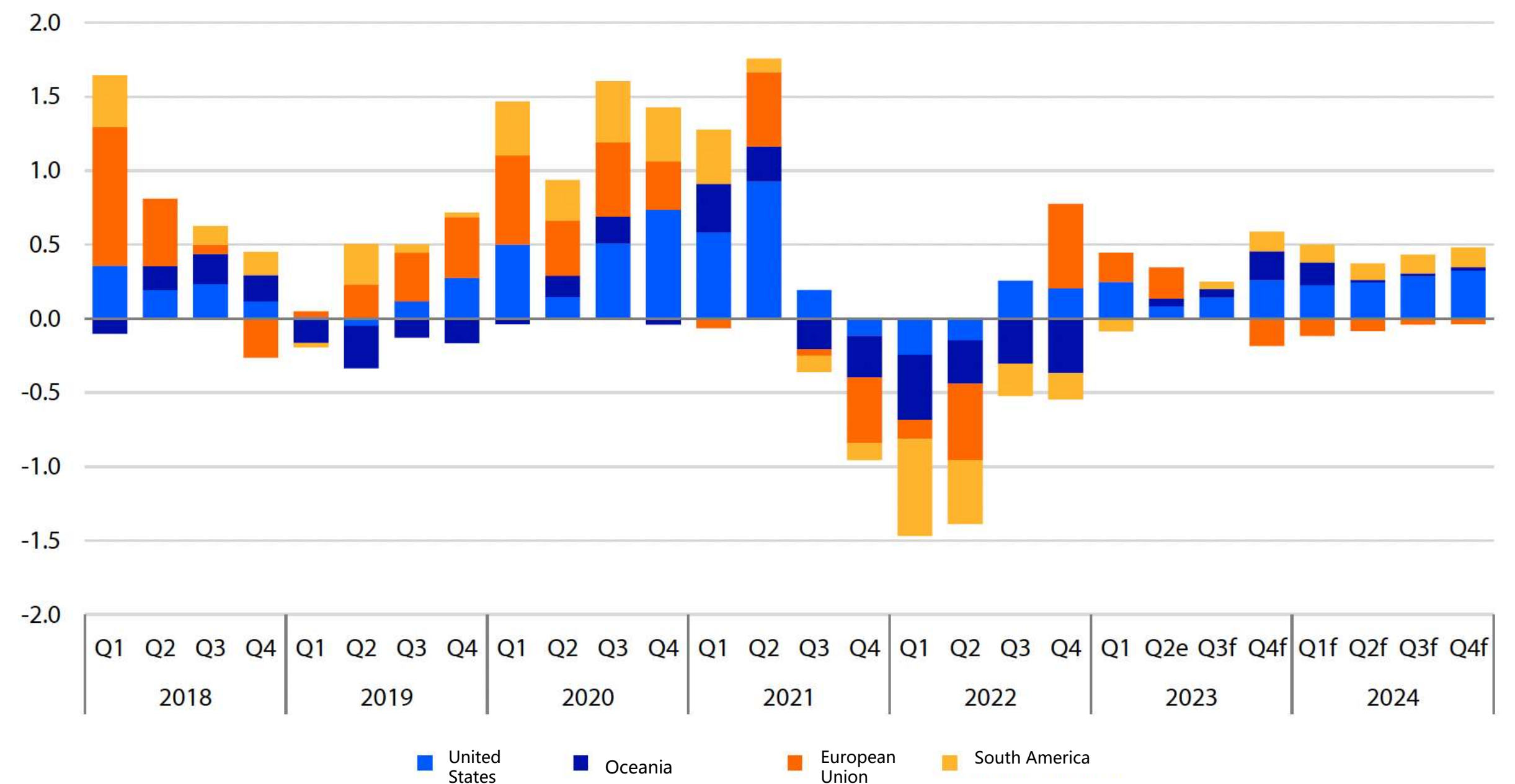
Proportion of milk powder exported to China by various countries in 1H2023

Source: China Customs



Prediction of the production growth rate of the largest 7 exported dairy products

Source: Rabobank



International Raw Milk Production

Source: Rabobank , USDA

USA

- 2023Q1: herd increased by 50,000 heads
- 2023M4: the production increased by 0.3% year on year with narrowed growth MoM. The number of herd decreased by 16,000 heads, and profit pressure forced farmers to slaughter unprofitable cows
- 2023E: a year-on-year growth of 0.7%

European Union

- 2023Q1: the production increased by 0.6% year on year, lower than market expectations, mainly due to the arid climate, which affected feed sowing and harvesting
- 2023E: Q3 remained unchanged year on year, while Q4 decreased by 0.2% year on year
- 2024E: decreased by 0.2% year on year

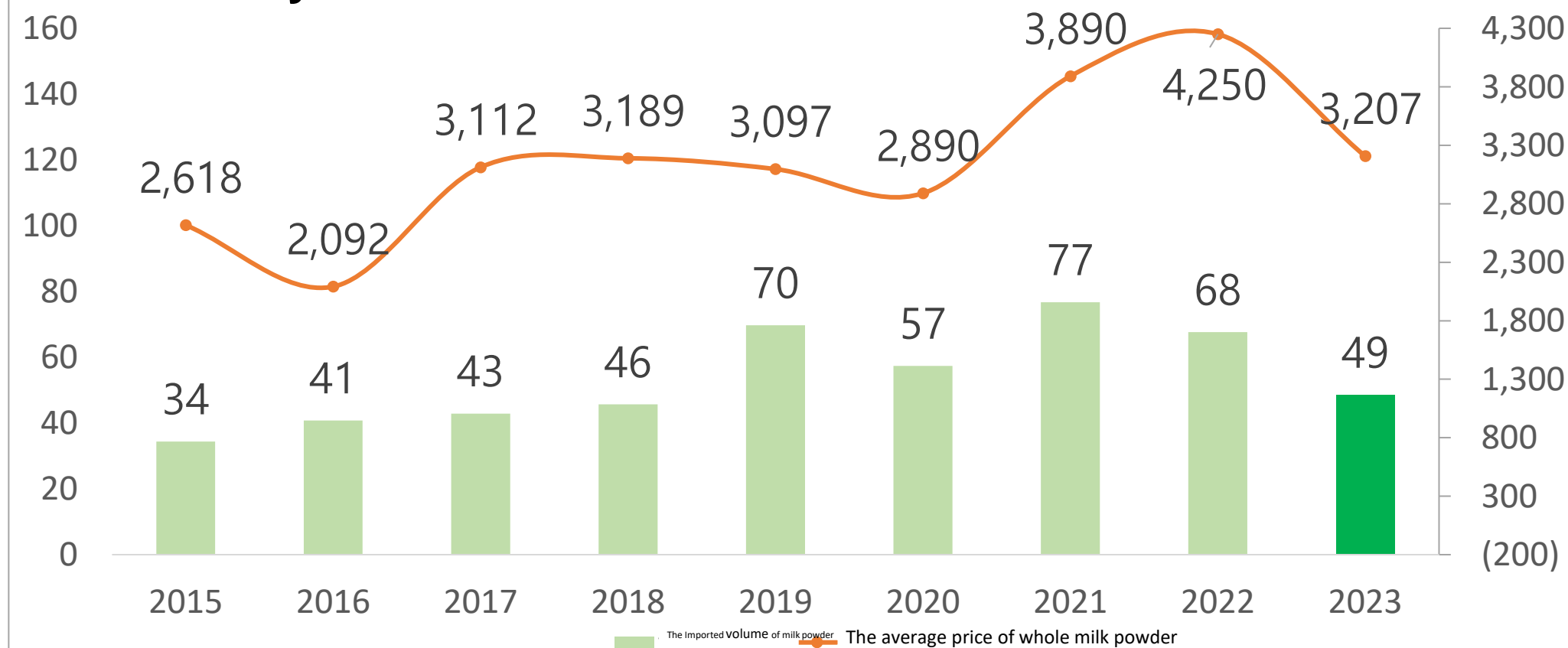
Australia

- 2023Q1: 5.9% decline YoY compared to 2022Q4
- 2023M4: production decreased by 1.7% year on year
- 2023E: remain stable
- 2024E: remain stable

New Zealand

- 2023E: increased by 1% year on year
- 2024E: increased by 1% year on year

Import Volume of China's Milk Powder and Price Trend from January to June

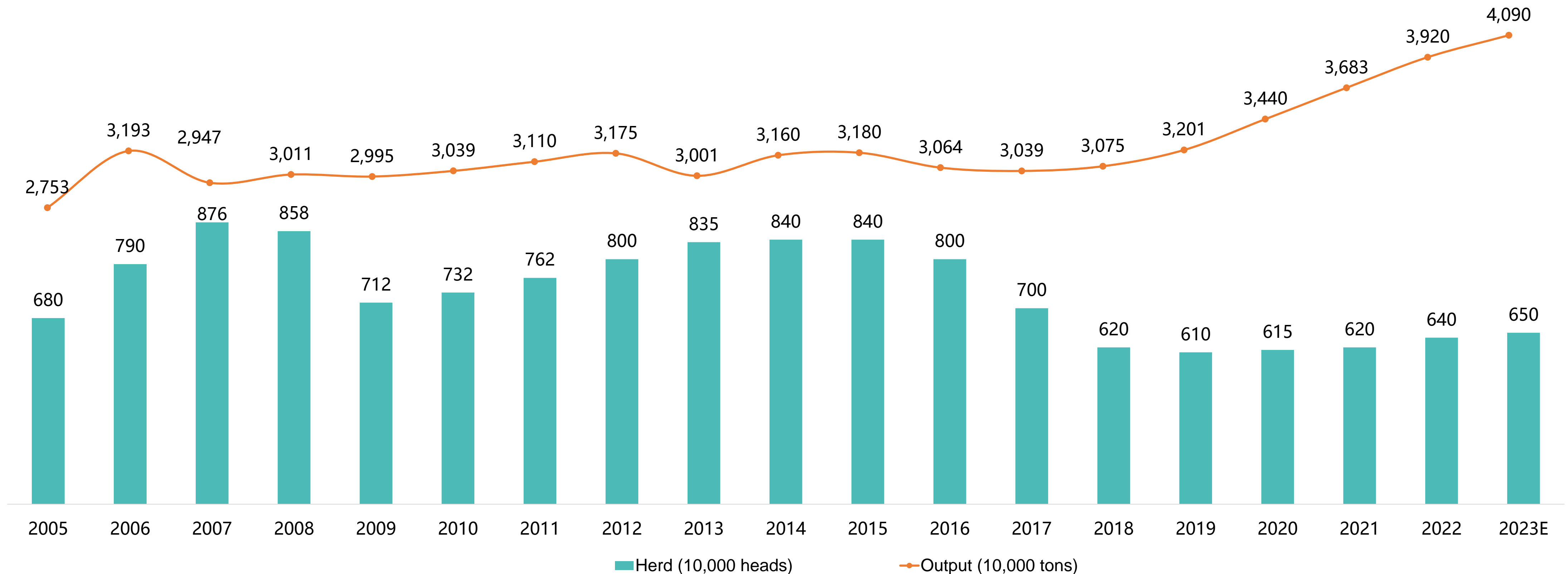


Domestic Dairy Herd and Raw Milk Production

Source: USDA

In 1H2023, the domestic raw milk production increased by **7.5%** year on year. Rabobank predicted in 2H2023, the year-on-year growth rate would further slow down to **4%** and annual production would increase by **5.1%** year on year; the USDA predicted a year-on-year increase of **4.3%** in production in 2023, with a slowdown in growth.

The USDA predicted China's dairy herd would be **6,500,000 heads in 2023**, increasing by **1.6%** year on year compared to the end of 2022 .

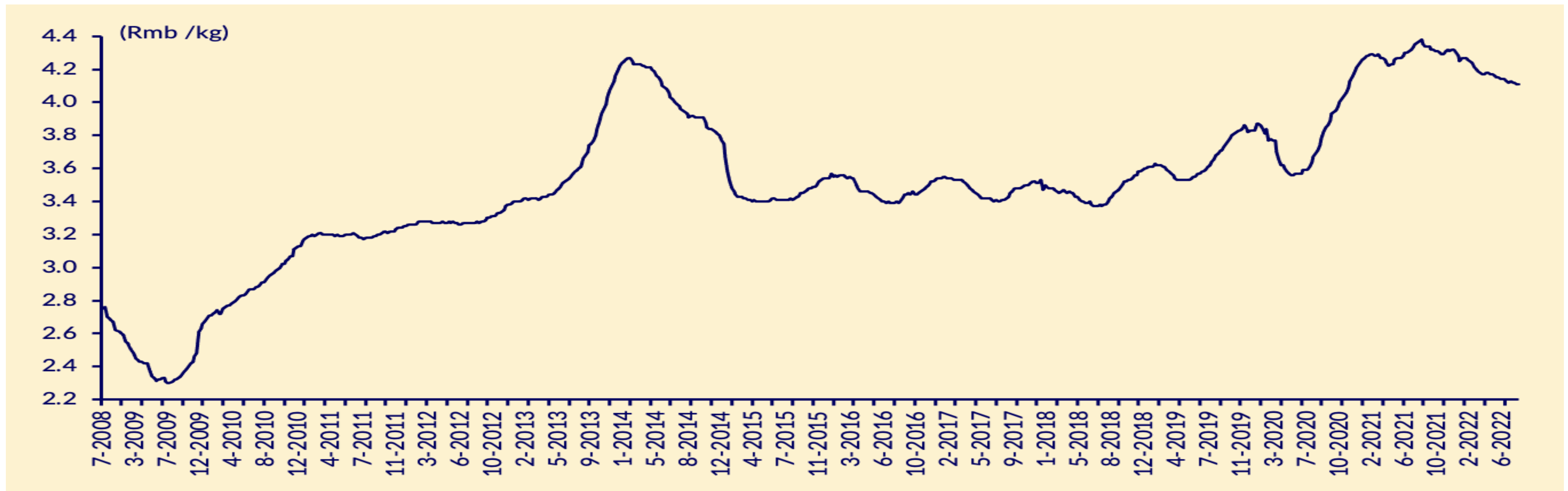


Changes to Periodic Fluctuations in Milk Prices

Source: Ministry of Agriculture Rural Affairs

The fluctuation of milk prices is mainly influenced by the supply and demand relationship. If demand does not recover as expected, the market will experience an oversupply situation, leading to a decrease in milk prices. This will cause tremendous pressure on small farms, forcing them to eliminate herds and even withdraw from market. Big farms take the opportunity to expand their scales, seize market share, and enhance competitiveness.

There is still a cycle in the upstream dairy industry, **but due to the strengthened linkage between big dairy groups and downstream dairy enterprises, milk price fluctuation is more stable than in the market, with gradual weakening of cyclical nature.**



THANK YOU

