



中信期货有限公司
CITIC Futures Company Limited

**Investment consulting business qualification:
CSRC License [2012] No. 669**

投资咨询业务资格：证监许可【2012】669号

中国生猪期货

China Live Hog Futures

基础介绍 Introduction

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1. 期货合约 Introduction

2. 产业链 Industry Chain

3. 供需概况 Supply and Demand

4. 价格影响因素 Price Influencing factors

5. 交易策略类型 Trading and Arbitrage Strategies

Futures Contract

1.1 期货合约



交易品种	生猪
交易单位	16吨/手
报价单位	元（人民币）/吨
最小变动价位	5元/吨
涨跌停板幅度	不超过上一交易日结算价±4%
合约交割月份	1、3、5、7、9、11月
交易时间	上午9:00 - 11:30，下午1:30 - 3:00及交易所规定的其他交易时间
最后交易日	合约月份倒数第4个交易日
交割日期	最后交易日后第3个交易日
交割品质	大连商品交易所生猪交割质量标准（F/DCE LH001-2021）
交割地点	大连商品交易所生猪指定交割仓库、指定车板交割场所
最低交易保证金	合约价值的5%
交割方式	实物交割
交易代码	LH
上市机构	大连商品交易所

Source: DCE CITIC Futures

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Futures Contract

1. 1 期货合约



Product	Live Hog
Contract Size	16 MT per lot
Price Quotation	(RMB) Yuan per MT
Minimum Price Fluctuation	5 Yuan / MT
Daily Price Limits	± 4% from the settlement price of the previous trading day
Listed Contracts	Jan, Mar, May, Jul, Sep, Nov
Trading Hours	9:00-11:30 a.m., 1:30-3:00 p.m., Beijing Time, Monday to Friday, and other trading hours announced by DCE
Last Trading Day	The last but three trading day of the contract month
Delivery Period	The 3rd trading day after the last trading day
Grades and Quality Specifications	Live Hog Delivery Quality Standard of DCE (F/DCE LH001-2021)
Delivery Venues	The delivery warehouses and FOT delivery sites of live hog designated by DCE
Minimum Trading Margin	5% of contract value
Settlement Type	Physical delivery
Product Symbol	SC
Listing Exchange	DCE

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Physical delivery

1. 2交割标的



项目	质量标准	允许范围	升贴水
外观	应具有瘦肉型猪的体型外貌，行走自然，无疝气，体表无脓包或肿块，无异常喘息特征。	行走不自然或有疝气	扣价100元/头
		体表有脓包或肿块	扣价50元/头
平均体重 / (Kg)	[100, 120]	(120, 130]	扣价0元/吨
		(130, 140]	扣价600元/吨
		>140	扣价1000元/吨
单体体重 / (Kg)	[90, 140]	(140, 150]	扣价0元/头
		>150	扣价200元/头
		<90	扣价1000元/头

Source: DCE CITIC Futures

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Physical delivery

1. 2交割标的



Item	Quality Standards	Scope of Tolerance	Premiums/Discounts
Appearance	form and appearance of lean hogs, natural walking, no hernia, absence of pustules or lump on surface of body and abnormal wheezing.	Unnatural walking or having hernias	Discount of 100 CNY/hog
		Presence of pustules or lump on surface of body	Discount of 50 CNY/hog
Average Weight/(Kg)	[100,120]	(120,130]	Discount of 0 CNY/ton
		(130,140]	Discount of 600 CNY /ton
		>140	Discount of 1000 CNY /ton
Individual Weight/(Kg)	[90,140]	(140,150]	Discount of 0 CNY / hog
		>150	Discount of 200 CNY /hog
		<90	Discount of 1000 CNY /hog

Source: DCE CITIC Futures

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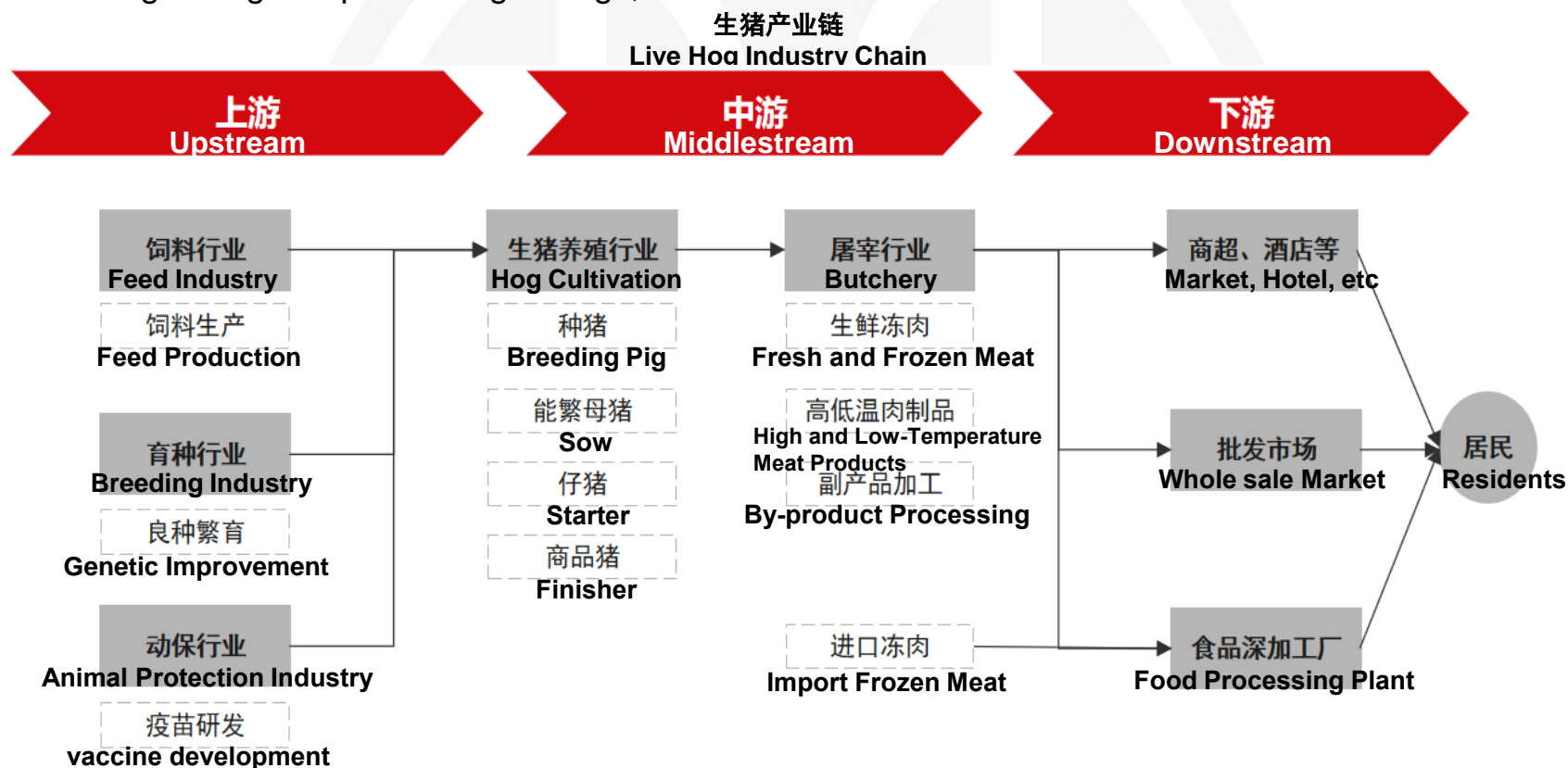
2. 产业链 Industry Chain

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- ◆ 生猪养殖行业产业链上游主要为饲料行业、育种行业、疫苗兽药等；中游为生猪的养殖培育；下游为生猪的屠宰加工、及各类销售渠道。
- ◆ The upstream of the Hog industry chain includes the feed industry, breeding industry, vaccines, animal medicine, etc. The middlestream consists of Hog Cultivation and Nursery Industry. The downstream involves the slaughtering and processing of hogs, as well as various sales channels.

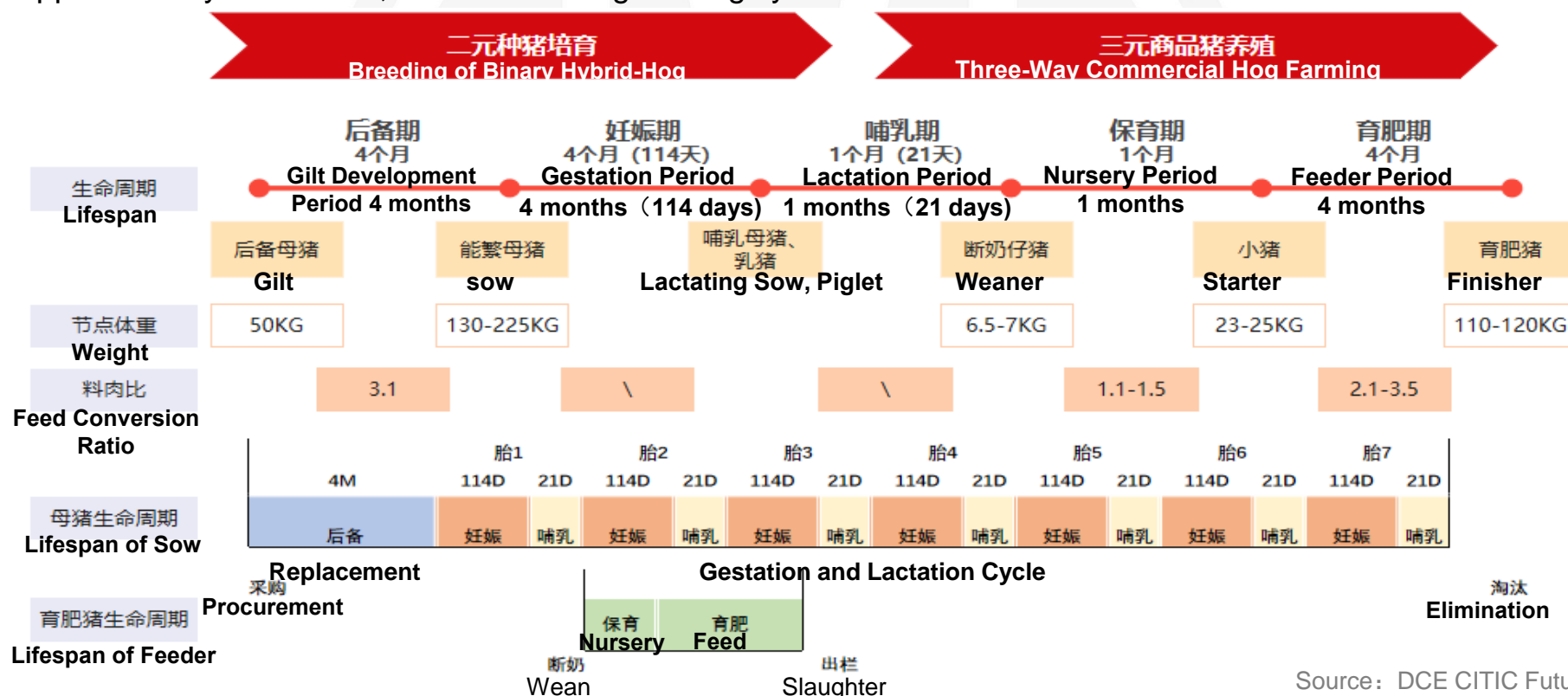


Source: DCE CITIC Futures

Live Hog Lifespan

2. 2生猪生命周期

- 母猪生命周期约4-4.5年。商品猪生命周期约6个月。后备母猪性成熟历时4个月，能繁母猪妊娠4个月，小猪长大历时6个月。从能繁母猪存栏量的增加传导至商品猪出栏的增加，共计大约10个月，这也是猪周期的由来。
- The lifespan of a sow is about 4-4.5 years, and that of a commercial hog is around 6 months. It cost 4 months, 4 months and 6 months for a gilt to be sexual maturity, for a breeding sow to gestate, and for a piglet to reach maturity. The increase in the inventory of breeding sows to the increase in the commercial hog supply spans approximately 10 months, thus constituting the hog cycle.



Source: DCE CITIC Futures

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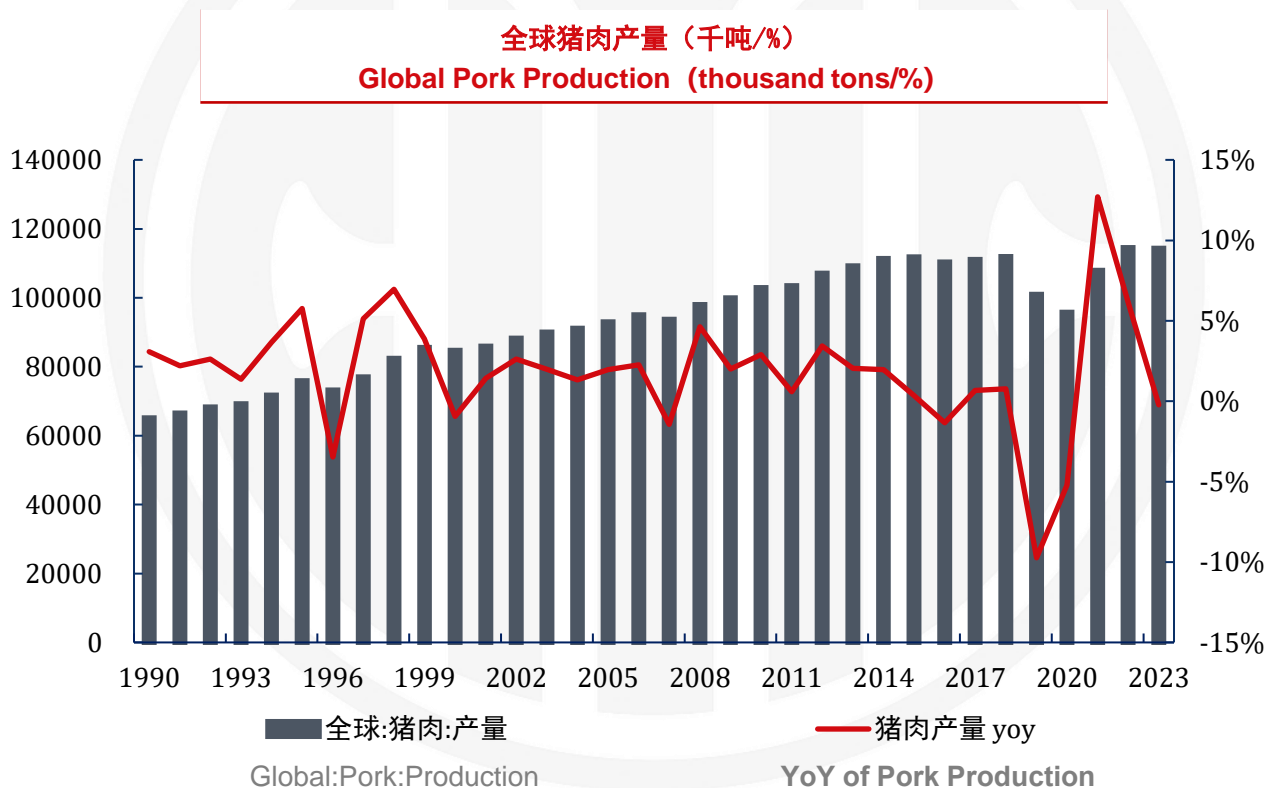
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Global Pork Supply and Demand

3.1.1 全球猪肉供需

- ◆ 近30年以来，全球猪肉产量、消费量总体保持平稳向上的增长，据USDA预测，2023年产销量将分别达1.27亿吨和1.13亿吨。
- ◆ Over the past three decades, global pork production and consumption have maintained a steady upward growth trend. According to USDA forecasts, pork production and consumption are projected to reach 127 million tons and 113 million tons, respectively, in 2023.

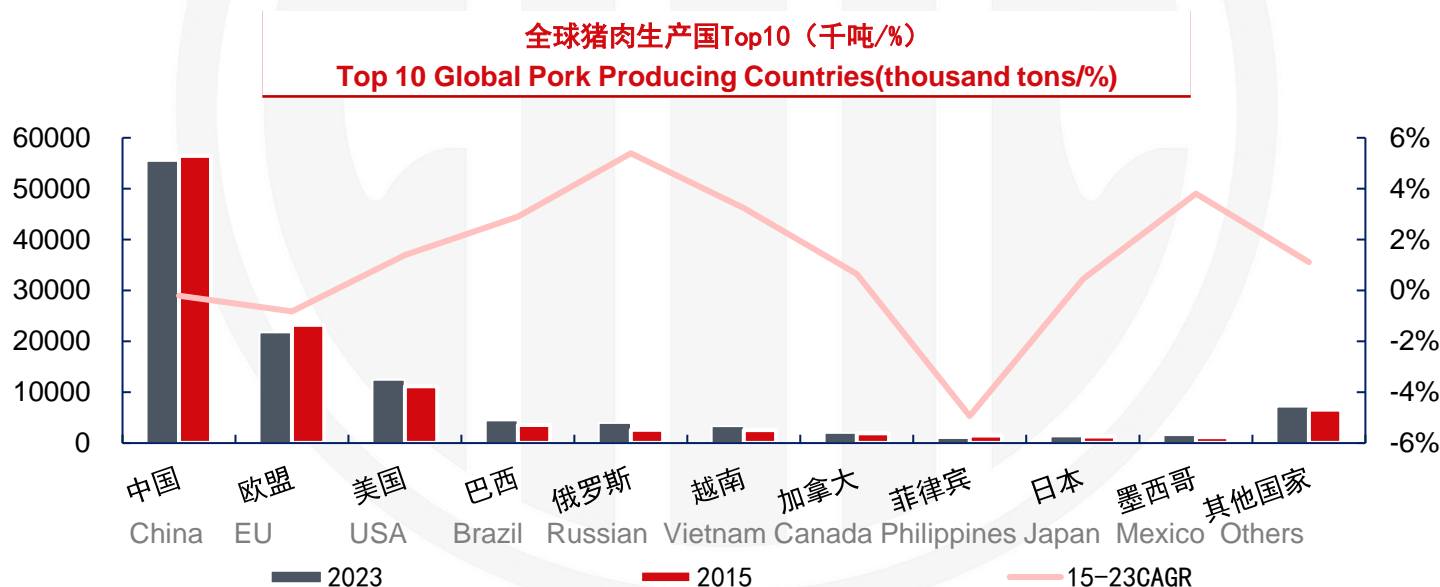


资料来源: Wind 农业部 涌益咨询 卓创资讯 中信期货研究所
Source: Wind, China's Ministry of Agriculture, Yongyi Consulting, Sublime China Information, CITIC Future

Global Pork Supply and Demand

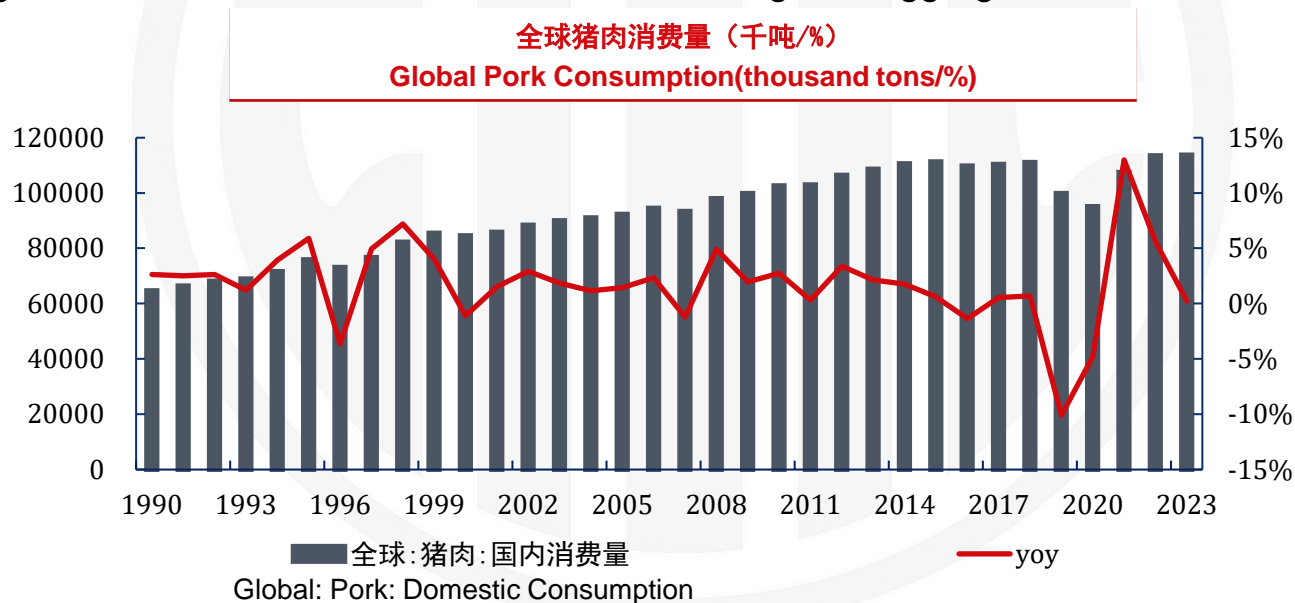
3.1.2 全球猪肉供需

- ◆ 从1990年至2018年，猪肉产量28年CAGR=2.0%，猪肉消费量CAGR=1.9%，步调一致的稳重有升。自2019年起，在非洲猪瘟影响之下，猪肉产量大幅被动地缩减，当年同比下降19%，带动销量同步下滑。最后在低基数下，2020年产销量出现高增。目前逐步恢复至正常水平。
- ◆ From 1990 to 2018, the 28-year CAGRs for pork production and consumption are 2.0% and 1.9%. In 2019, due to the impact of African Swine Fever, pork production experienced a significant passive reduction, resulting in a 19% yoy decline that year, which also led to a synchronous decline in sales volume. Eventually, benefiting from a low base, pork production and consumption in 2020 experienced a substantial growth. Currently, the productions are gradually recovering to normal level.



资料来源: Wind 农业部 涌益咨询 卓创资讯 中信期货研究所
Source: Wind, China's Ministry of Agriculture, Yongyi Consulting, Sublime China Information, CITIC Future

- ◆ 分国家看，中国是全球第一猪肉产销国。2015-2023年中国猪肉产量呈小幅下降态势（-1.69%），销量则呈现小幅上升趋势（+0.69%），绝对值依旧远超排名第二的欧盟，产销量分别达5550万吨/5757万吨，占全球的48.5%/50.7%。
- ◆ **China stands as the world's first pork producer and consumer.** From 2015 to 2023, China's pork production has experienced a slight downward trend (-1.69%), while consumption has exhibited a minor upward trajectory (+0.69%). The quantities continue to substantially surpass EU, the second-ranking region. China's production and consumption volumes have reached 55.5 million tons and 57.57 million tons, representing a dominant share of 48.5% and 50.7% of the global aggregate.

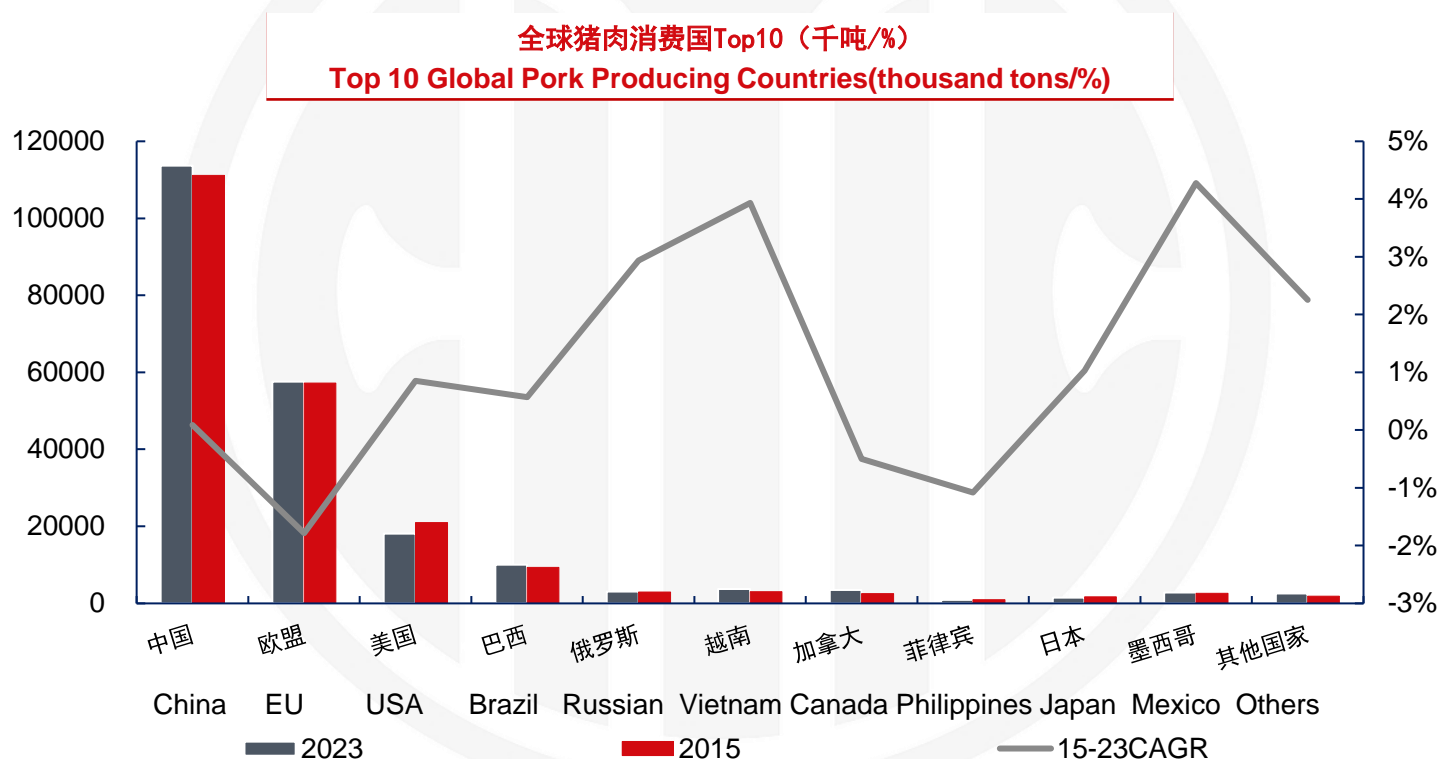


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Global Pork Supply and Demand

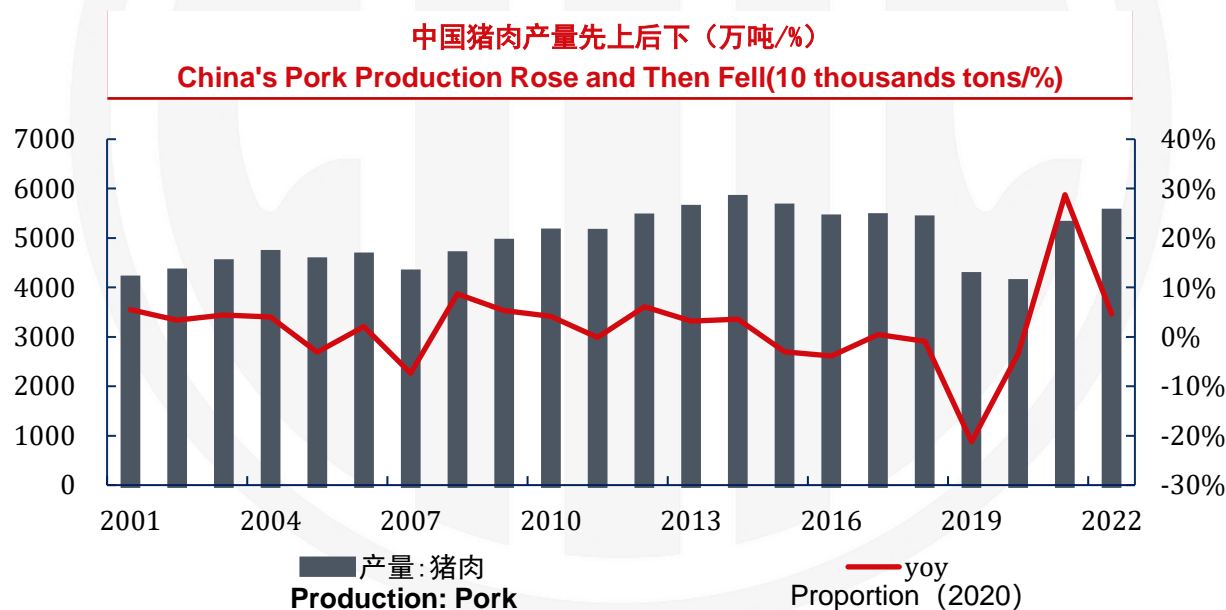
3.1.4全球猪肉供需

- ◆ 欧盟、美国产销分别均位列第二、第三，产量分别达2175万吨/1241万吨；销量分别达1812万吨/999.5万吨。
- ◆ EU and USA stand in second and third positions, respectively, in both production and consumption. The productions are 21.75 million tons and 12.41 million tons and consumptions are 18.12 million tons and 9.995 million tons respectively.



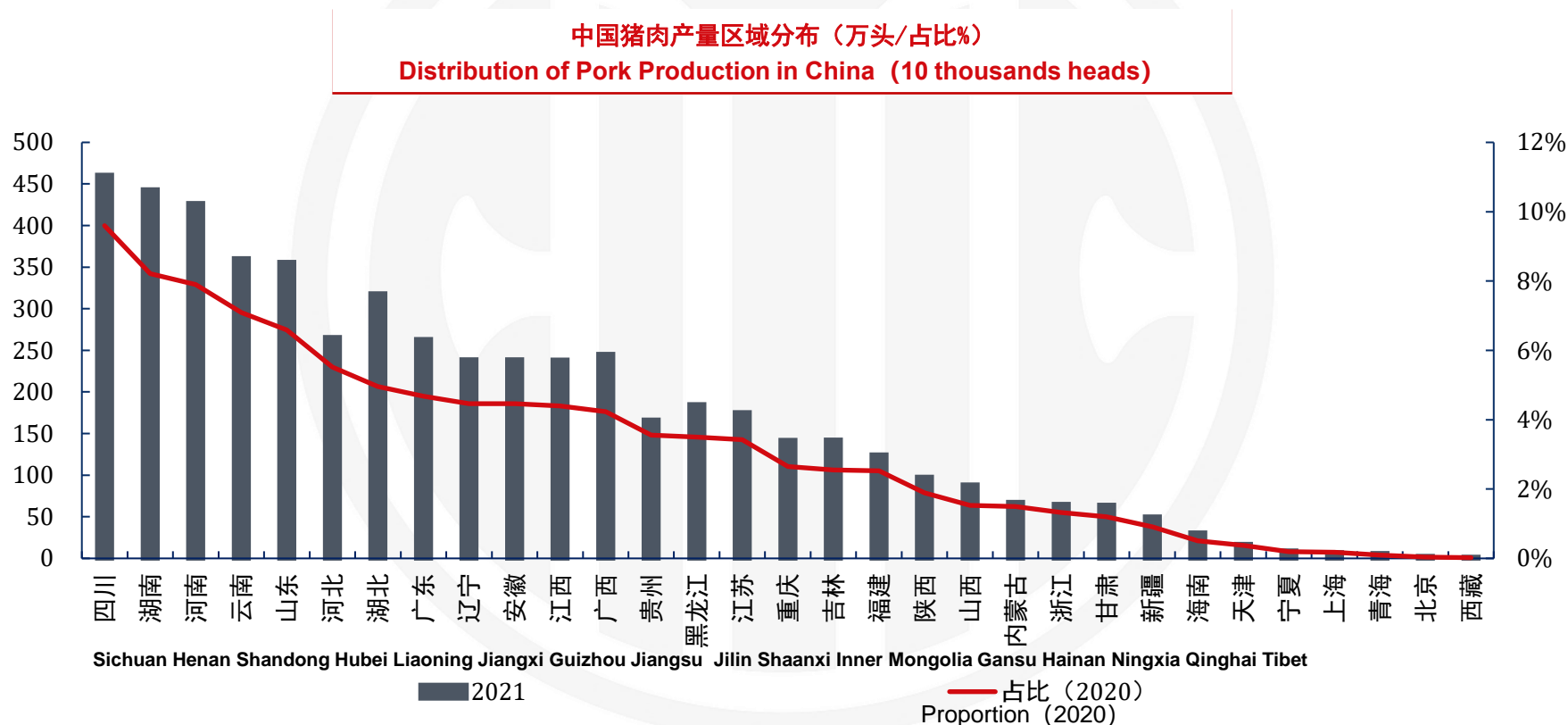
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- ◆ 供给方面，我国猪肉产量总体呈先上后下走势。具体来看，2000年-2014年，我国猪肉产量呈现稳增长态势，CAGR达2.8%，累计增长46.8%，2014年达峰5821万吨。2015年起，主要受饮食结构改变，蓝耳病爆发，环保限产整治，以及随后的非洲猪瘟冲击等影响，产量在之后的几年内总体上呈下降态势，叠加新冠疫情的扰动，2020年产量达4113万吨，创近20年来新低。2022年产量达5541万吨。
- ◆ In terms of supply, China's pork production has shown an overall upward trend followed by a decline. From 2000 to 2014, it exhibited a stable growth pattern, CAGR = 2.8%, peaking at 58.21 million tons in 2014. However, starting from 2015, factors such as changes in dietary habits, outbreaks of diseases like blue ear, environmental regulations, and impacts of African Swine Fever and COVID-19 led to a general downward trend, contributing to 41.13 million tons in 2020, the lowest in nearly 20 years. Currently, production has rebounded to 55.41 million tons in 2022.



资料来源：Wind 农业部 涌益咨询 卓创资讯 中信期货研究所
Source: Wind, China's Ministry of Agriculture, Yongyi Consulting, Sublime China Information, CITIC Future

- ◆ 从我国猪肉产区分布看，按省份分，四川于居首位，2021年产量达460万吨，占比10%；其次是湖南、河南、云南、山东、湖北等地，占比在8%~5%之间。
- ◆ When looking at China 's pork production regions, Sichuan takes the lead with 4.6 million tons in 2021 (10%). Other key provinces include Hunan, Henan, Yunnan, Shandong, and Hubei (8% - 5%). The main production areas are Southwest 、 Northeast China, Middle and Lower Reaches of Yangtze River.



资料来源：Wind 农业部 涌益咨询 卓创资讯 中信期货研究所
Source: Wind, China's Ministry of Agriculture, Yongyi Consulting, Sublime China Information, CITIC Future

- ◆ 需求方面，从总量看，我国猪肉人均消费量近年来基本在18-22千克/人区间波动，大体保持稳定。
- ◆ In terms of demand, China's per capita pork consumption has remained steady, fluctuating between 18 to 22 kilograms in recent years
- ◆ 目前，猪肉的人均消费量依然处于肉类消费量首位。分城镇农村看，猪肉消费量增速略有差异。农村居民人均猪肉消费量随人均收入的增加而增速较快，CAGR达7%，城镇居民人均猪肉消费量增速则不及农村，CAGR达5%。
- ◆ Pork remains the dominant meat consumed per capita. When considering urban and rural areas, there are slight differences in the growth rate of pork consumption. Rural areas saw faster pork consumption growth (CAGR 7%) caused by rising incomes, while urban growth was slower (CAGR 5%).

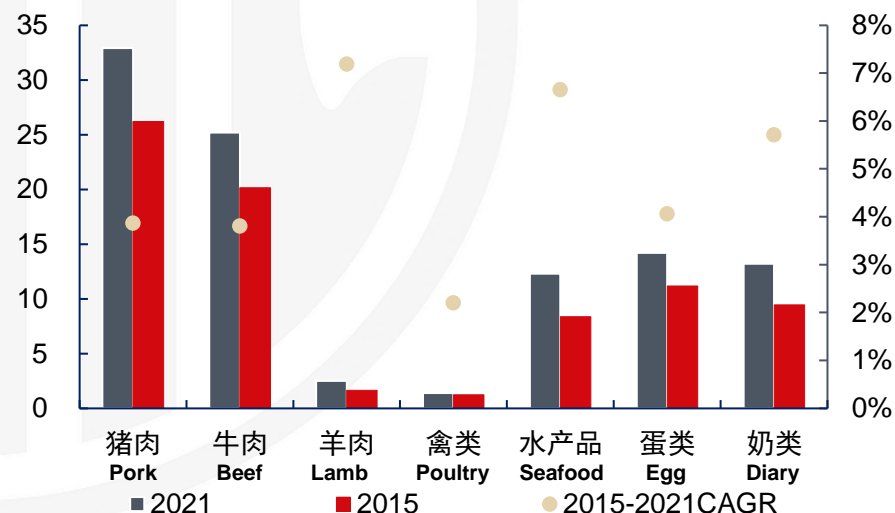
中国猪肉人均消费量（分城镇农村）（千克）

China's Per Capita Pork Consumption (Urban and Rural) (Kg)

年份 year	全国居民人均消费量 China's Per Capita Consumption	城镇居民人均消费量 Urban	农村居民人均消费量 Rural
2021	25.20	25.10	25.40
2020	18.20	19.04	17.11
2019	20.28	20.31	20.23
2018	22.83	22.74	22.96
2017	20.11	20.62	19.49
近四年CAGR CAGR in recent 4 years	6%	5%	7%

2021年中国猪肉人均消费量（分品类）（千克）

2021 China's Per Capita Pork Consumption by Category (Kg)



资料来源：Wind 农业部 涌益咨询 卓创资讯 中信期货研究所

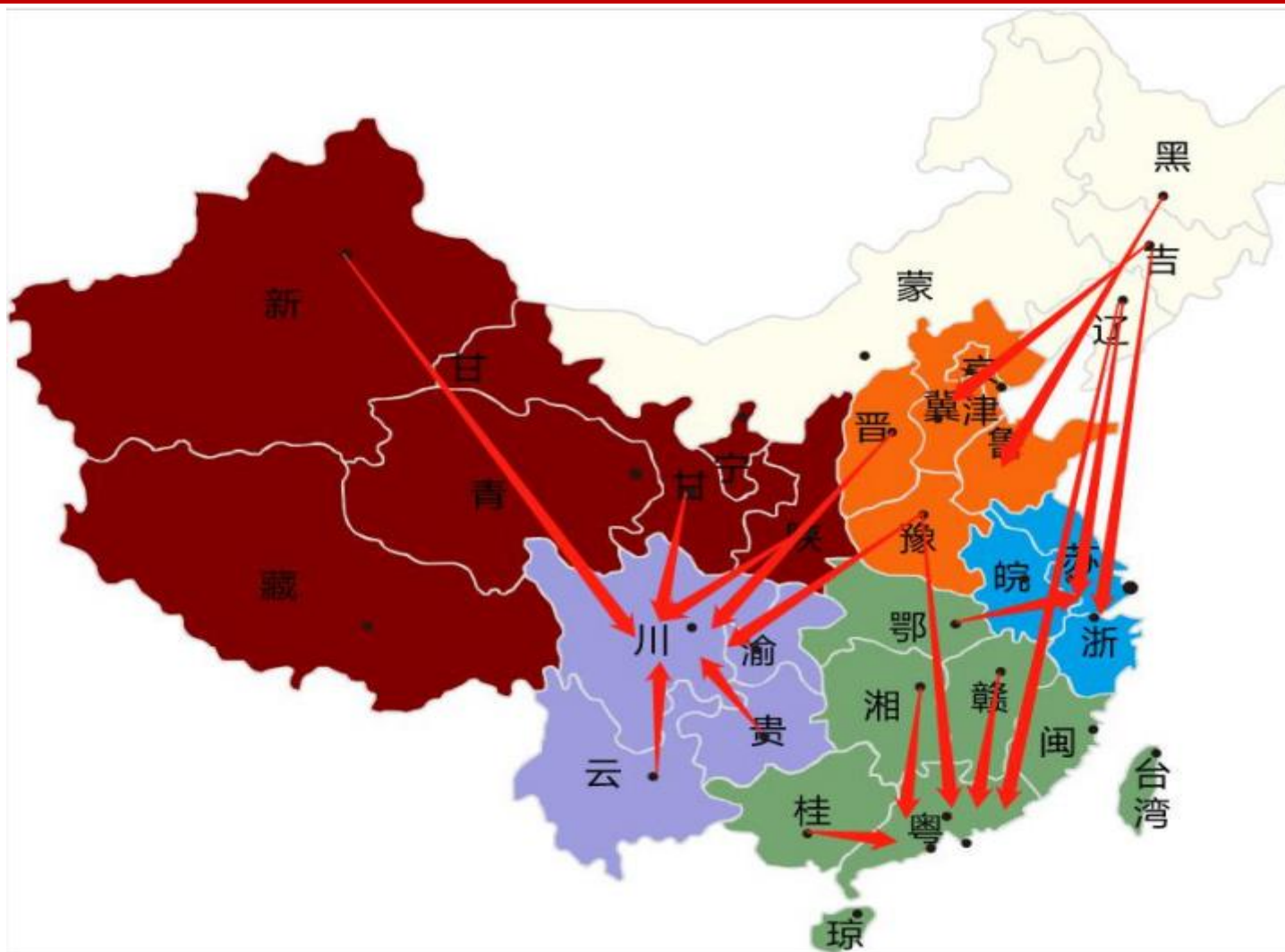
Source: Wind, China's Ministry of Agriculture, Yongyi Consulting, Sublime China Information, CITIC Future

- 国内贸易方面，我国主要形成北猪南调的局面。由于区域供需形式不同，长期以来形成了净调入区域和净调出区域，如下图所示，净调入区域包括北京、江苏、浙江、上海、广州和四川等主销区；净调出区域包括黑龙江、吉林、辽宁、河北、河南、湖北和湖南等主产区。
- **In terms of domestic trade, China has predominantly developed a situation where the northern regions supply while the southern regions demand pork.** Net inflow areas include major consumption regions like Beijing, Jiangsu, Zhejiang, Shanghai, Guangzhou, and Sichuan, while net outflow areas encompass major production regions like Heilongjiang, Jilin, Liaoning, Hebei, Henan, Hubei, and Hunan.
- 国内生猪贸易主要决定因素是各区域之间的价差。因东三省近年来一直是猪价的最低区域，因此北猪南调成为常态。但是在2022年初开始，各省份间价差缩小，北猪南调明显减少。后期生猪的流向主要取决于区域间的价差，低价区生猪流向高价区为主流趋势。
- Price differentials between regions play a vital role in domestic hog trade. The northeastern region consistently having the lowest prices in recent years, leading to the common "**North Supply, South Demand**" pattern, this trend has diminished since early 2022 due to narrowed price differences between provinces. Subsequent hog flows are influenced by regional price disparities, with hogs from lower-priced areas primarily moving to higher-priced areas.

资料来源：Wind 农业部 涌益咨询 卓创资讯 中信期货研究所
Source: Wind, China's Ministry of Agriculture, Yongyi Consulting, Sublime China Information, CITIC Future

Domestic Pork Trade in China

3.3.2国内猪肉贸易



资料来源：Wind 农业部 涌益咨询 卓创资讯 中信期货研究所
Source: Wind, China's Ministry of Agriculture, Yongyi Consulting, Sublime China Information, CITIC Future

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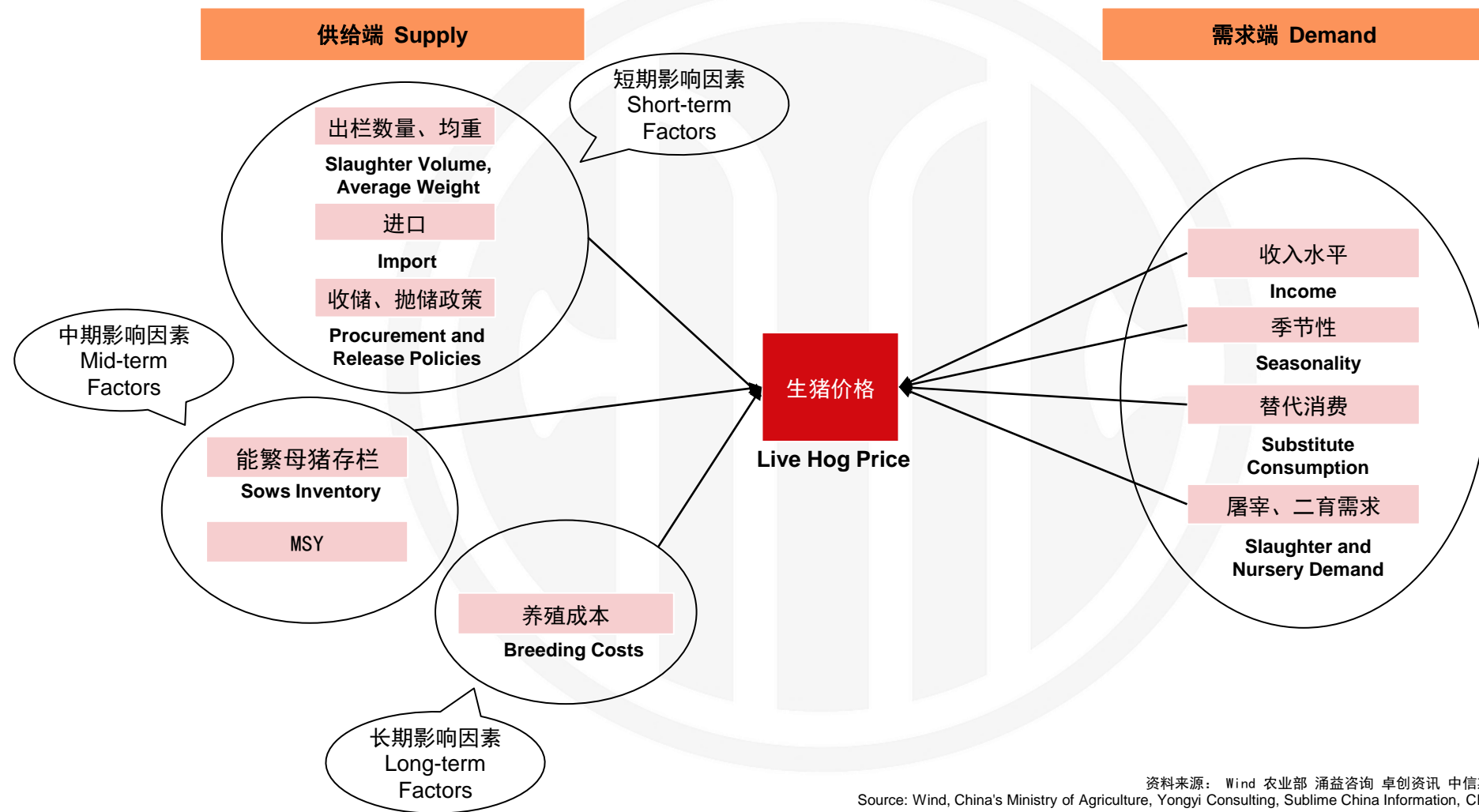
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Factors Affecting Hog Prices

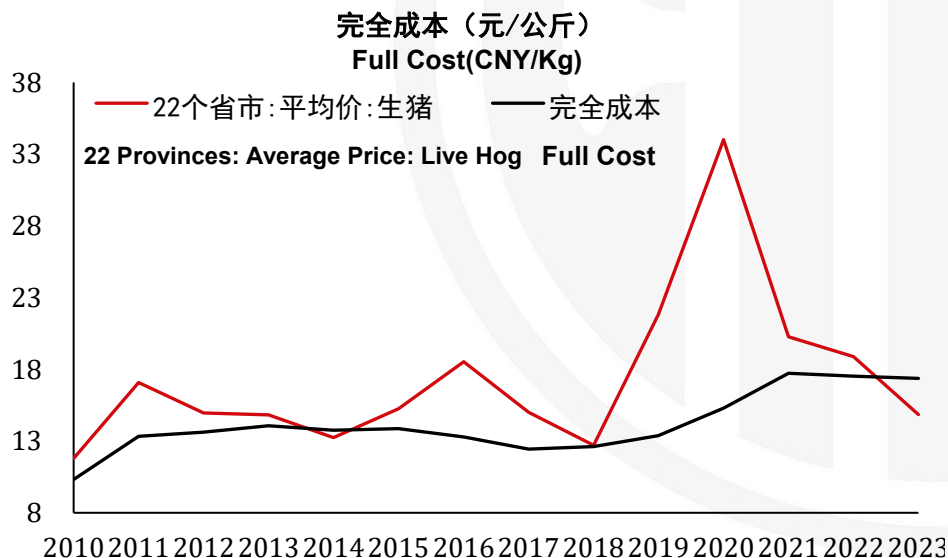
4. 1 生猪价格影响因素



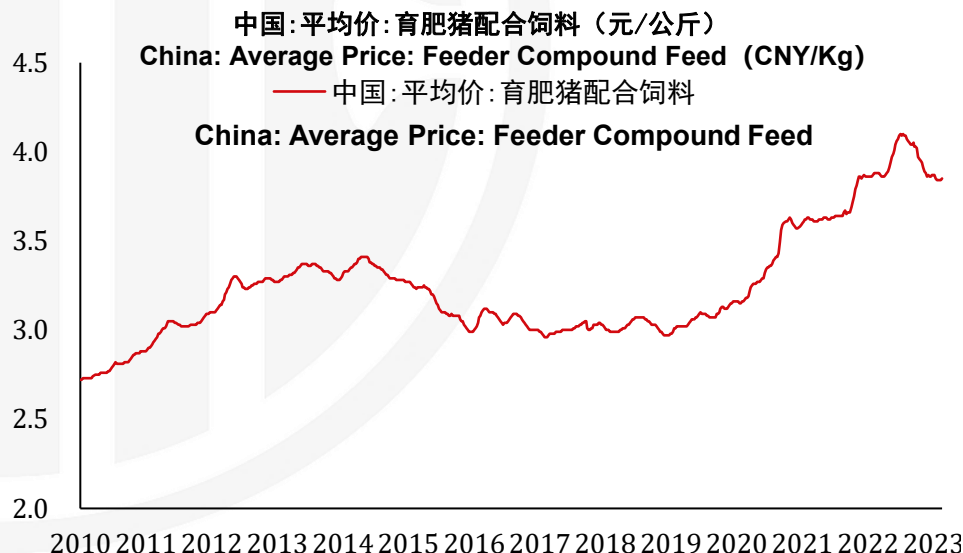
资料来源: Wind 农业部 涌益咨询 卓创资讯 中信期货研究所
Source: Wind, China's Ministry of Agriculture, Yongyi Consulting, Sublime China Information, CITIC Future

- 不同主体的最终猪肉产品价格几乎一致，行业呈现出超额收益时，便会有大量资金涌入行业，导致产能过剩进而平滑掉超额收益，而当行业呈现出低于预期的收益时，大量产能便退出市场，进而形成新的供需平衡，导致收益回归正常。因此完全成本对于猪价具有长期支撑作用。 The prices of final products from different sources are almost identical. When the industry generates excess returns, a significant influx of capital occurs, leading to overcapacity and subsequently smoothing out the excess returns. Conversely, when the industry underperforms expectations, excess capacity exits the market, establishing a new supply-demand equilibrium, leading to a normal return. Therefore, full cost has a long-term support effect on pork prices.

完全成本支撑生猪均价
Full Cost supports the Live Hog Price



饲料成本变化
Change of Feed Costs

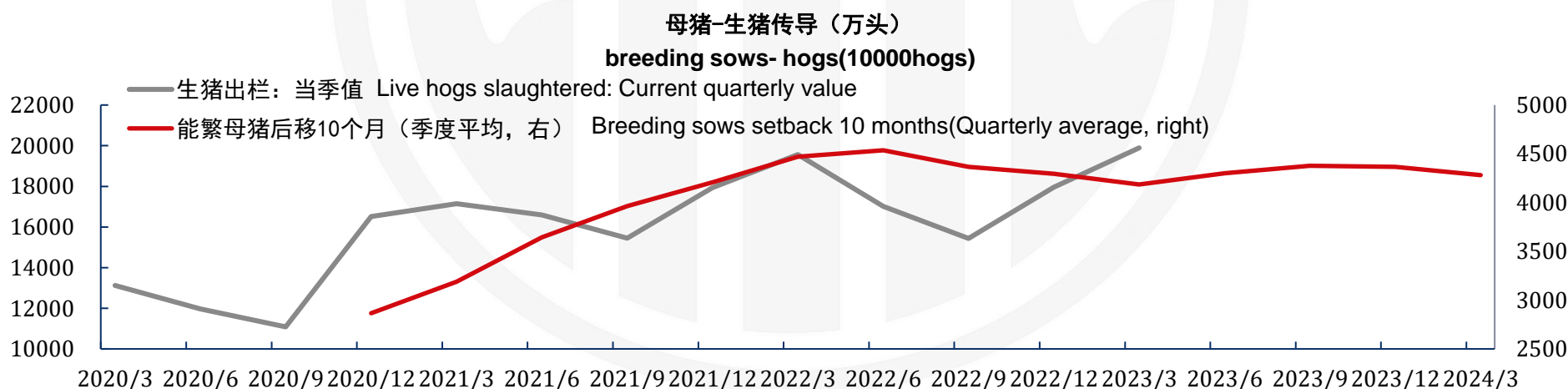


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Source: Wind, China's Ministry of Agriculture, Yongyi Consulting, Sublime China Information, CITIC Future

- ◆ 能繁母猪对应10-11月后的生猪出栏量。Breeding sows correspond to the number of live hogs slaughtered after 10 or 11 months
- ◆ 我们将农业部统计的母猪存栏环比与十个月之后的生猪出栏量进行比较，发现两者呈现较为一致的关系。当能繁母猪存栏环比持续下降后，对应10个月后生猪出栏减少，反之同理。 Comparing the MOM change of breeding sow stocks in the statistics of the Ministry of Agriculture with the number of live hogs slaughtered ten months later, it can be found that the two show a more consistent relationship. When the MOM change of breeding sows continues to decline, it corresponds to a decrease in the number of live hogs slaughtered after 10 months, and vice versa.
- ◆ 在每年的一季度，由于春季集中出栏，可能会出现实际出栏量偏多的情况。 In the first quarter of the year, there may be a bias toward actual slaughter due to concentrated spring slaughter.

能繁母猪对应10个月后生猪出栏

Breeding sows correspond to the number of live hogs slaughtered after 10months



资料来源：Wind 农业部 涌益咨询 卓创资讯 中信期货研究所

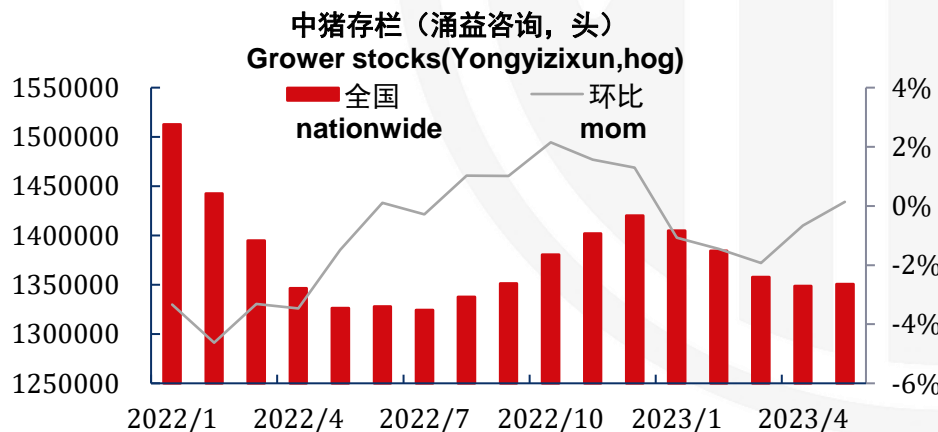
Source: Wind, Ministry of Agriculture, Yongyizixun, Sublime China Information, CITIC Futures

Supply : Short-term impact factors

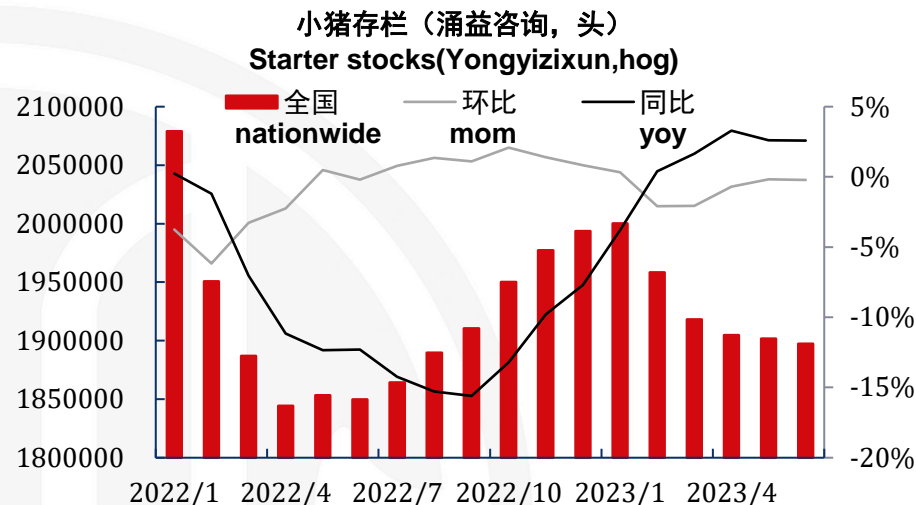
4. 4供给分析框架：短期

- 小猪存栏量对应6个月后生猪出栏供应；中猪存栏变化对应3-4个月以后生猪出栏的变化。在产能变化的过程中，小猪存栏先下降，而后传导到中猪、大猪。 The small pig stocks correspond to the supply of live hogs to be slaughtered 6 months later, changes in medium pig stocks correspond to changes in hogs to be slaughtered 3 and 4 months later. In the process of production change, starter stocks decline first, which then trickles down to grower and finisher.

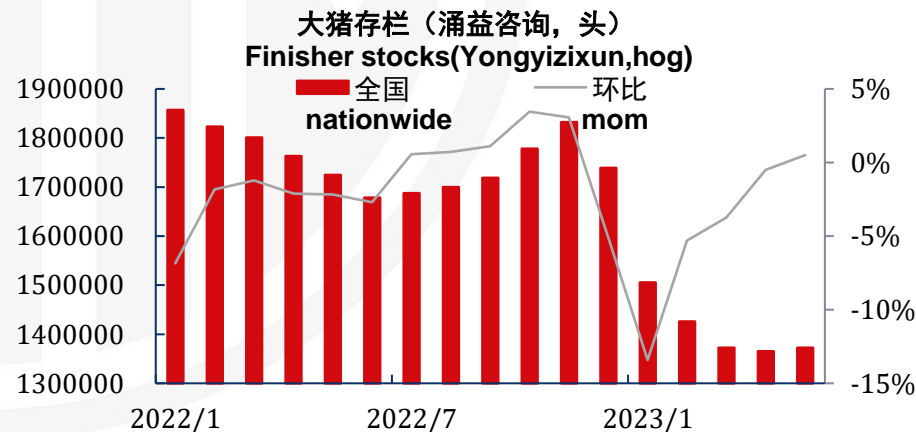
中猪存栏Grower stocks



小猪存栏Starter stocks



大猪存栏Finisher stocks



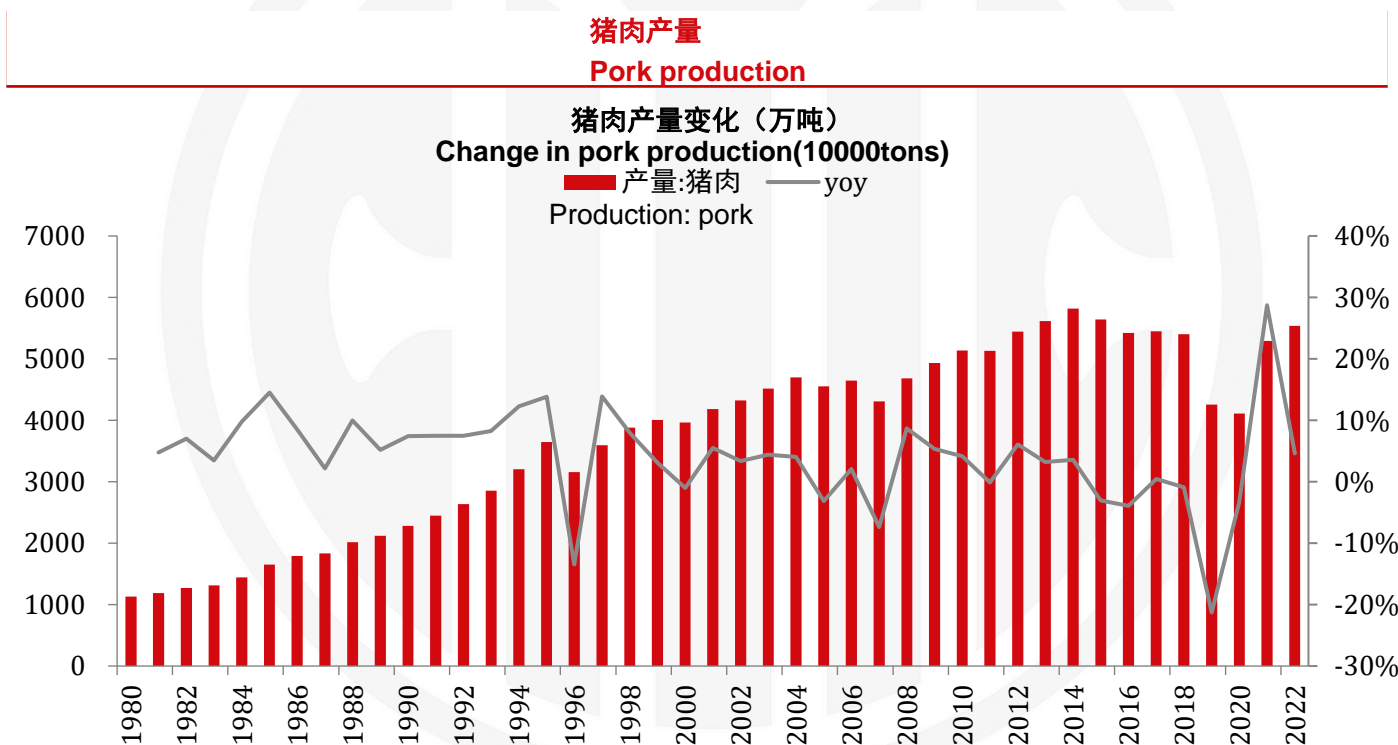
资料来源：Wind 农业部 涌益咨询 卓创资讯 中信期货研究所

Source: Wind, Ministry of Agriculture, Yongyizixun, Sublime China Information, CITIC Futures

Demand: Long term - change in per capita consumption

4.5.1需求分析框架：长期-人均消费量变化

- ◆ 从长期历史趋势看，1980年以来，我国猪肉产量整体呈波动增长趋势，在个别明显减产年份，由于猪肉总量有限，导致生猪消费量出现下降。
- ◆ In terms of long-term historical trends, since 1980, China's pork production has shown a fluctuating growth trend, and in individual years of significant production reductions. the limited total amount of pork resulted in a decline in hog consumption.

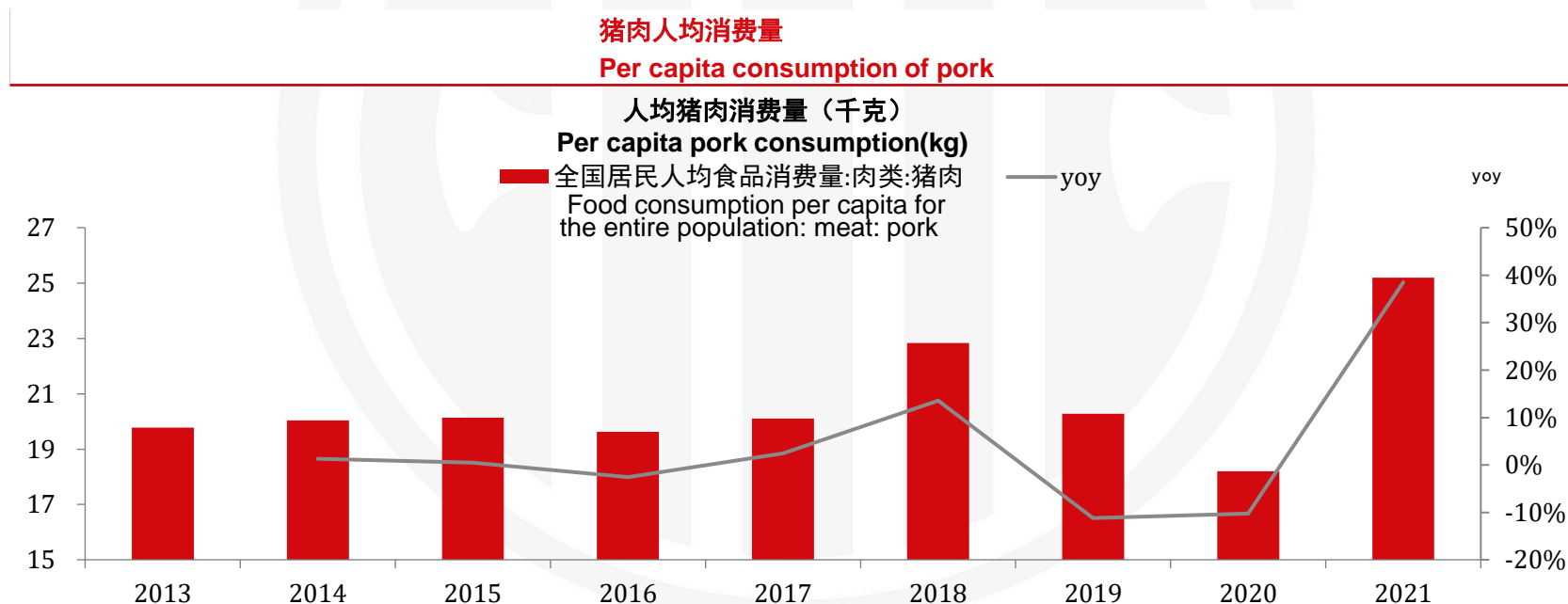


资料来源：Wind 农业部 涌益咨询 卓创资讯 中信期货研究所
Source: Wind, China's Ministry of Agriculture, Yongyi Consulting, Sublime China Information, CITIC Future

Demand: Long term - change in per capita consumption

4.5.2需求分析框架：长期-人均消费量变化

- ◆ 非瘟及新冠疫情发生以前，我国人均猪肉消费量总体稳中有增，2018年，人均消费猪肉23千克，环比+14%。
China's per capita pork consumption was generally stable and increasing before the ASF and COVID-19, In 2018, per capita consumption of pork was 23 kg, +14% YoY.
- ◆ 2019年-2020年，国内产量有限、高价抑制需求、新冠疫情影响，人均猪肉消费量出现下滑。 In 2019-2020, per capita pork consumption declined due to limited domestic production, high prices and the impact of COVID-19.
- ◆ 2021年-2022年，随着产能和需求的恢复，人均猪肉消费量增长。 In 2021-2022, per capita pork consumption increased as capacity and demand recovered.



资料来源：Wind 农业部 涌益咨询 卓创资讯 中信期货研究所
Source: Wind, China's Ministry of Agriculture, Yongyi Consulting, Sublime China Information, CITIC Future

Demand: Medium term - consumption seasonality

4.6.1 需求分析框架：中期-消费季节性

历史生猪月度均价涨跌幅度

Historical average monthly live hog price increases and decreases

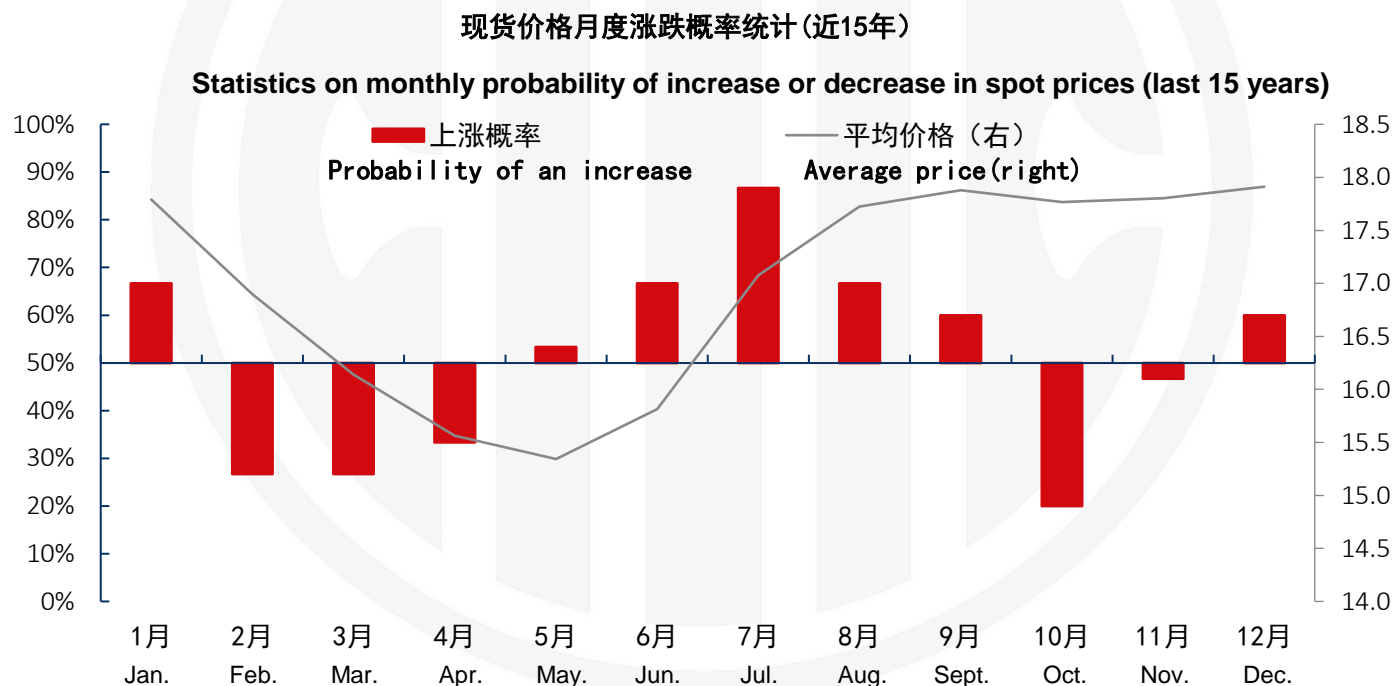
	1月 ^{Jan.}	2月 ^{Feb.}	3月 ^{Mar.}	4月 ^{Apr.}	5月 ^{May.}	6月 ^{Jun.}	7月 ^{Jul.}	8月 ^{Aug.}	9月 ^{Sept.}	10月 ^{Oct.}	11月 ^{Nov.}	12月 ^{Dec.}
2007	1.30%	-5.19%	-5.36%	3.80%	20.94%	8.39%	15.55%	2.95%	-8.57%	-1.80%	11.07%	10.18%
2008	5.50%	2.08%	1.01%	-1.29%	-7.27%	-1.76%	-3.50%	-5.01%	-8.22%	-9.42%	-1.09%	13.08%
2009	1.41%	-10.28%	-7.72%	-9.55%	-6.83%	6.69%	8.35%	10.95%	0.33%	-4.87%	0.98%	8.69%
2010	-3.06%	-12.73%	-8.33%	-1.20%	1.47%	1.83%	19.71%	5.89%	0.79%	1.69%	8.30%	-1.73%
2011	0.07%	6.70%	1.70%	0.44%	6.28%	15.49%	5.76%	-0.16%	0.47%	-8.35%	-7.24%	0.79%
2012	3.84%	-4.27%	-8.34%	-6.91%	-1.50%	-0.86%	0.06%	2.41%	3.29%	-1.78%	1.60%	9.71%
2013	6.72%	-10.20%	-14.04%	-7.93%	4.78%	11.96%	1.70%	8.24%	0.82%	-2.37%	-0.05%	0.27%
2014	-13.06%	-10.56%	-7.65%	-6.32%	18.90%	4.85%	3.07%	11.04%	-0.70%	-5.03%	-1.88%	-2.11%
2015	-4.57%	-6.91%	-2.01%	9.59%	8.80%	7.15%	15.73%	5.39%	-4.09%	-5.13%	-3.29%	2.87%
2016	5.25%	4.64%	3.85%	5.16%	4.41%	-1.97%	-9.25%	-0.77%	-2.12%	-11.28%	4.07%	3.22%
2017	4.91%	-4.46%	-6.85%	-4.65%	-7.82%	-4.58%	3.23%	3.37%	1.01%	-2.43%	0.01%	4.76%
2018	0.73%	-7.88%	-19.90%	-7.44%	-0.28%	12.06%	9.54%	8.69%	3.73%	-2.60%	-3.52%	-0.29%
2019	-7.32%	-1.93%	16.73%	7.82%	0.20%	10.12%	10.87%	23.04%	22.57%	28.98%	0.45%	-6.14%
2020	5.07%	6.03%	-4.33%	-6.72%	-11.70%	10.09%	13.11%	0.89%	-4.95%	-13.50%	-4.11%	12.93%
2021	6.99%	-16.72%	-5.64%	-16.32%	-16.64%	-24.00%	7.27%	-5.63%	-12.46%	-3.26%	34.92%	-2.30%
2022	-13.09%	-11.30%	-5.35%	6.99%	17.06%	6.51%	34.83%	-2.03%	8.51%	15.97%	-7.86%	-19.29%

资料来源：Wind 农业部 涌益咨询 卓创资讯 中信期货研究所

Source: Wind, Ministry of Agriculture, Yongyizixun, Sublime China Information, CITIC Futures

4. 6. 2需求分析框架：中期-消费季节性

- ◆ 下半年的需求较上半年更好。Demand was better in the second half of the year than in the first.
- ◆ 中秋前、春节前为猪肉消费旺季，价格上涨概率更高。Before Mid-Autumn Festival and Chinese New Year is the peak season for pork consumption, and the probability of price increase is higher.
- ◆ 节后猪肉需求回落，价格下跌概率更高。After the festival, the demand for pork falls back, and the probability of price decline is higher.



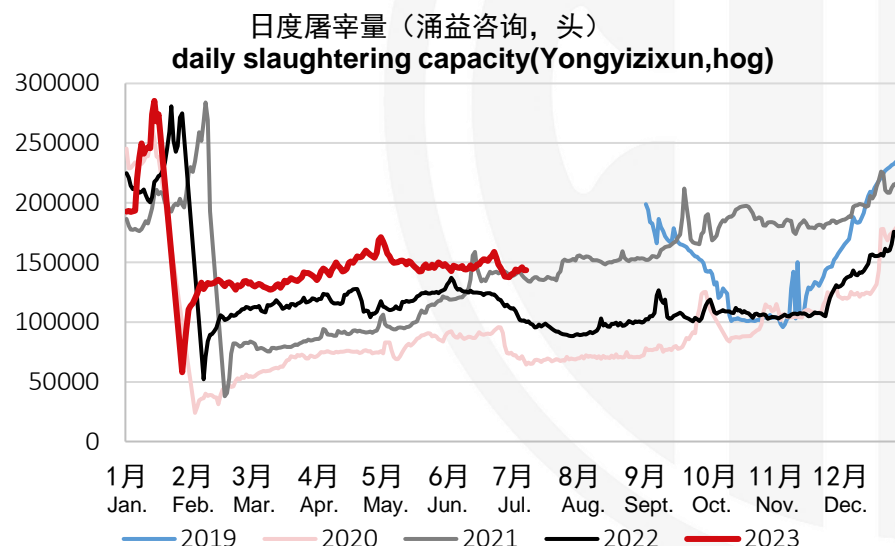
资料来源: Wind 农业部 涌益咨询 卓创资讯 中信期货研究所

Source: Wind, Ministry of Agriculture, Yongyizixun, Sublime China Information, CITIC Futures

- ◆ 屠宰量是供应量的体现，也是需求淡旺的反映。Slaughter is a reflection of supply, and also a reflection of weak demand.
- ◆ 当需求旺盛时，肉/猪比价偏高，屠宰利润增加，屠宰开工和屠宰量增加；反之，消费不好会抑制屠宰需求。When demand is high, the meat-to-hog ratio is higher, slaughtering profits increase, and slaughtering starts and slaughtering volume increase; conversely, poor consumption will suppress slaughtering demand.

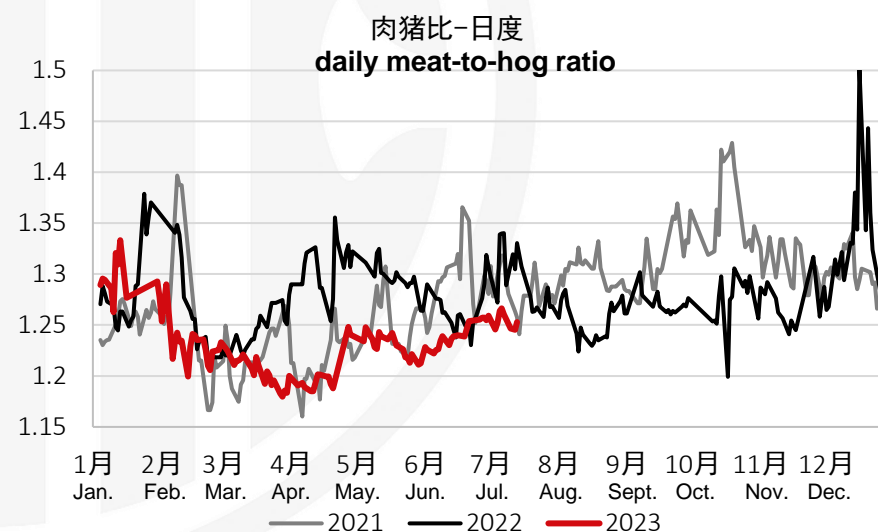
日度屠宰量

Daily slaughtering capacity



肉/猪比价

meat-to-hog ratio



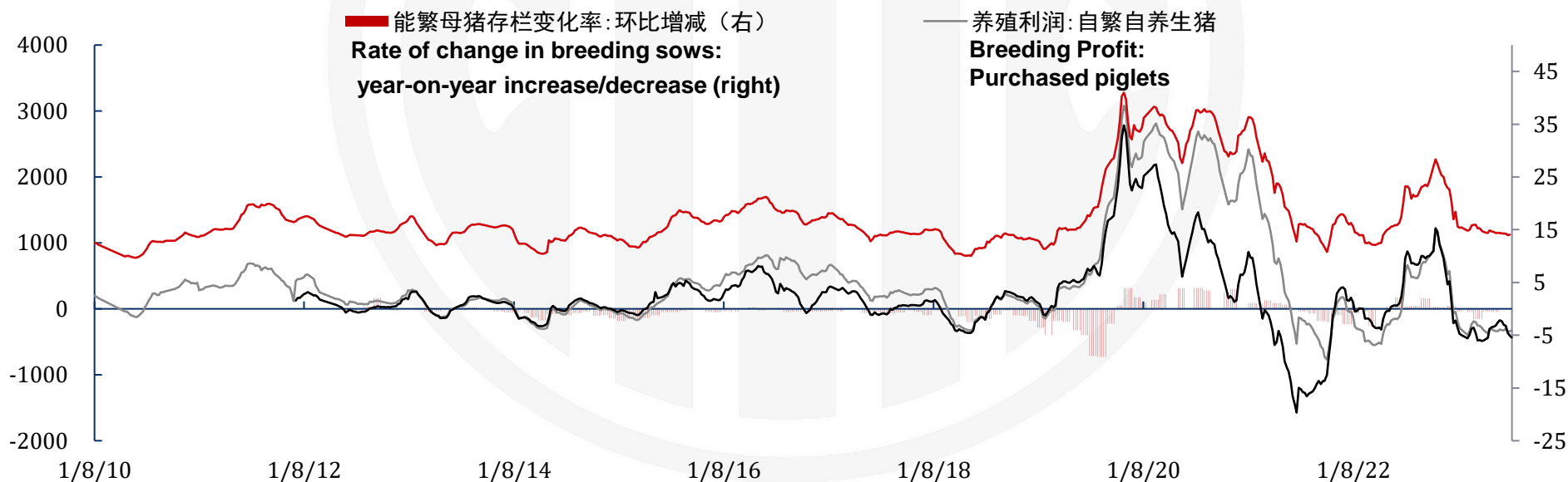
资料来源：Wind 农业部 涌益咨询 卓创资讯 中信期货研究所
Source: Wind, China's Ministry of Agriculture, Yongyi Consulting, Sublime China Information, CITIC Future

Profit: Profit changes in the hog cycle

4.8 利润分析框架：猪周期利润变化

- 生猪价格的周期运行驱动：“价格-利润-产能”的传导链条，以及疫病或政策等外部因素驱动。 The cyclical operation of live hog prices is driven by the transmission chain of "price-profit-capacity", and external factors such as epidemics or policies.
- 价格上行-利润上涨-产能扩张-供应增加-价格下降。价格下降-利润减少-产能收缩-供应减少-价格上行；疫病-产能收缩-供应减少-价格上行。 Conductive chain: Price rise - profit rise - capacity expansion - supply increase - price fall. Conductive chain: Price decline - profit reduction - capacity contraction - supply reduction - price upward; epidemic - capacity contraction - supply reduction - price upward.

猪周期中的利润、产能变化（元/头，元/公斤，万头）
Profit, capacity changes in hog cycle(CNY/hog, CNY/kg,10000hogs)



资料来源：Wind 农业部 涌益咨询 卓创资讯 中信期货研究所
Source: Wind, China's Ministry of Agriculture, Yongyi Consulting, Sublime China Information, CITIC Future

1. 期货合约 Introduction

2. 产业链 Industry Chain

3. 供需概况 Supply and Demand

4. 价格影响因素 Price Influencing factors

5. 交易策略类型 Trading and Arbitrage Strategies

- **期现套利**：利用期货市场与现货市场之间的价差进行的套利行为。**价差套利**：利用期货市场上不同合约之间的价差进行的套利行为。生猪作为生鲜品，由于不方便储存和运输，套利的主要方法为跨期套利。
- **Arbitrage**: the arbitrage behavior that takes advantage of the spread between the futures market and the spot market. **Spread arbitrage**: the arbitrage behavior using the price difference between different contracts in the futures market. Due to the inconvenience of storage and transportation, the main method of arbitrage is calendar spread arbitrage.

生猪套利

Live Hog Arbitrage

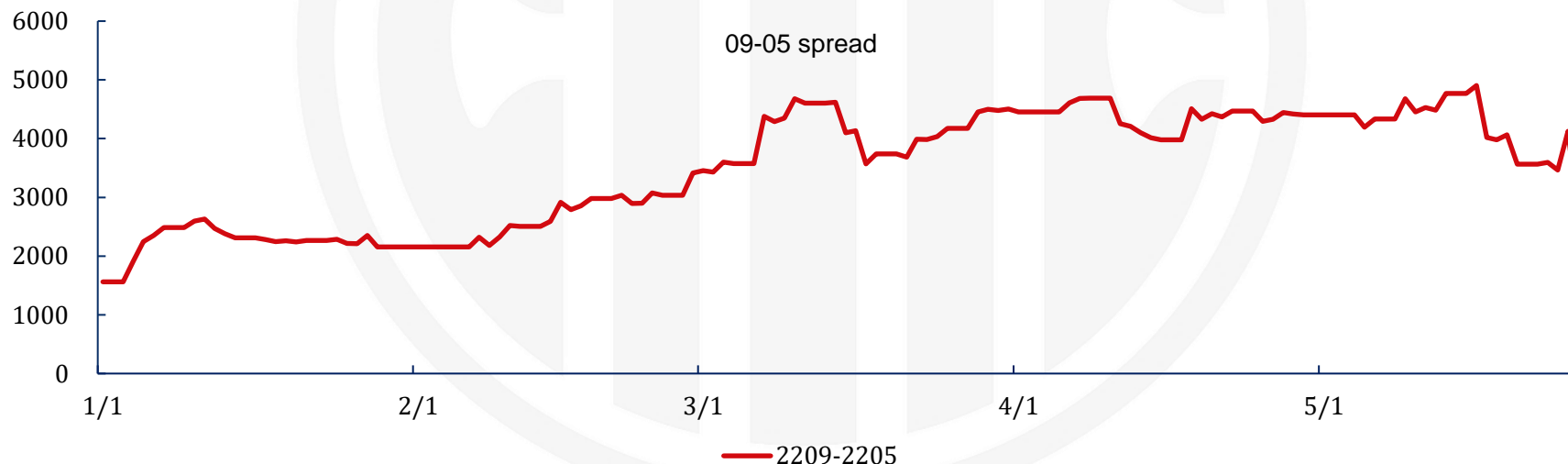
跨期套利

Calendar Spread Arbitrage

资料来源：Wind 农业部 涌益咨询 卓创资讯 中信期货研究所
Source: Wind, China's Ministry of Agriculture, Yongyi Consulting, Sublime China Information, CITIC Future

- 短期供需关系错配决定价格，而价格则会反作用于远期供需基本面，修复供需缺口，从而导致期差波动。
Short-term supply-demand mismatch determines price, price then reacts to forward supply and demand fundamentals, fixing the supply-demand gap, which leads to volatility in spreads.
- 一般来说金九银十，9、10月份受到双节提振，是生猪的需求旺季，而5月份相对淡季。因此按照理论，容易出现9月合约偏强而5月合约偏弱的走势。 Generally speaking, September and October are boosted by festivals, which is the peak demand season for hogs, while May is relatively off-season. Therefore, according to the theory, It is prone to a trend of strength in the 09 contract and weakness in the 05 contract.

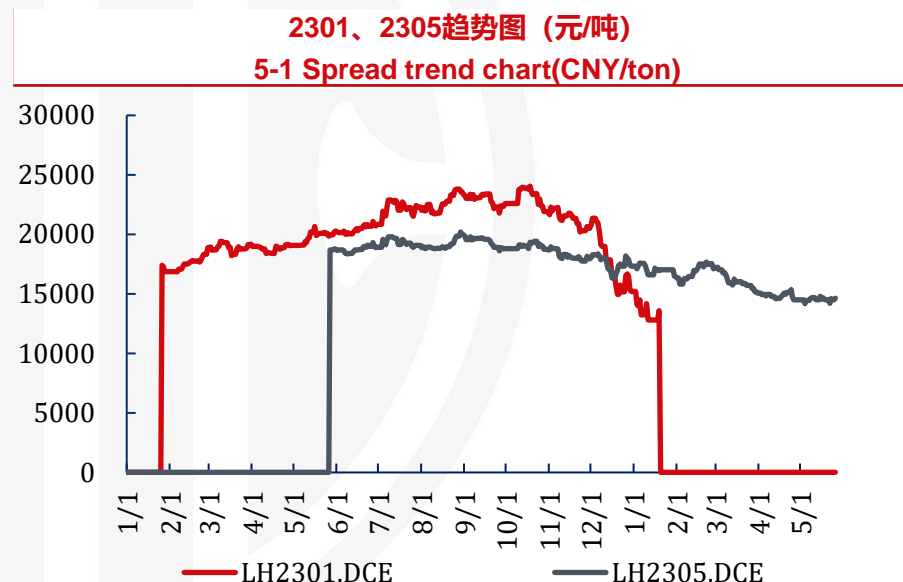
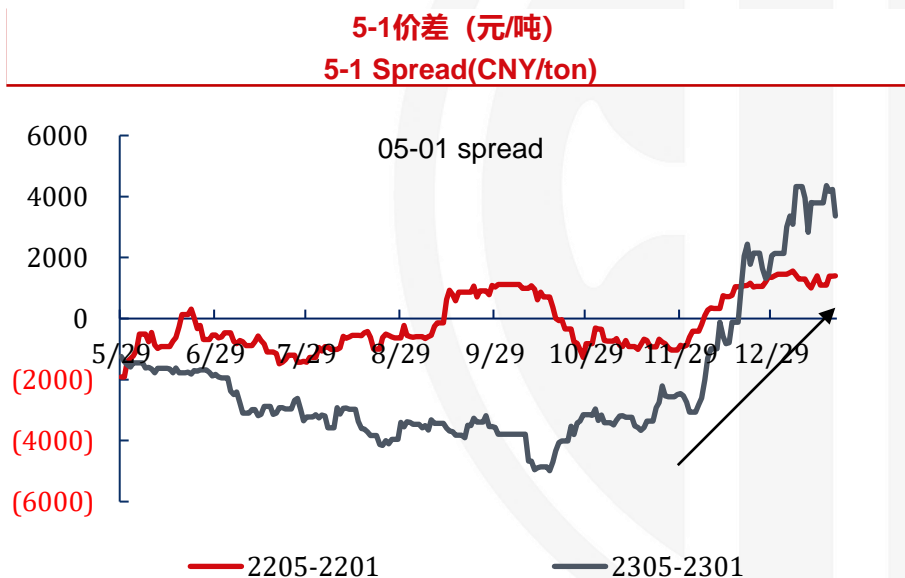
9-5价差（元/吨）
9-5 Spread(CNY/ton)



资料来源：Wind 农业部 涌益咨询 卓创资讯 中信期货研究所
Source: Wind, China's Ministry of Agriculture, Yongyi Consulting, Sublime China Information, CITIC Future

5. 3生猪跨期套利：5-1反套

- 2022年10月中旬起，二育群体疯狂，预期未来二育集中释放时会造成短期供应的大幅增加。从而带动近月合约（2301）价格下滑幅度远高于远月合约（2305），导致05-01价差快速上行，由负转正，走出一波反套行情。
- Second-breeding group went wild from mid-October 2022, and the market expects a significant increase in short-term supply as a result of a concentrated release of second-breeding in the future, which led to the 2301 contract price decline is much higher than the 2305 contract, resulting in a rapid upward movement of the 05-01 spread from negative to positive. And this is a good situation for reverse cash and carry arbitrage.



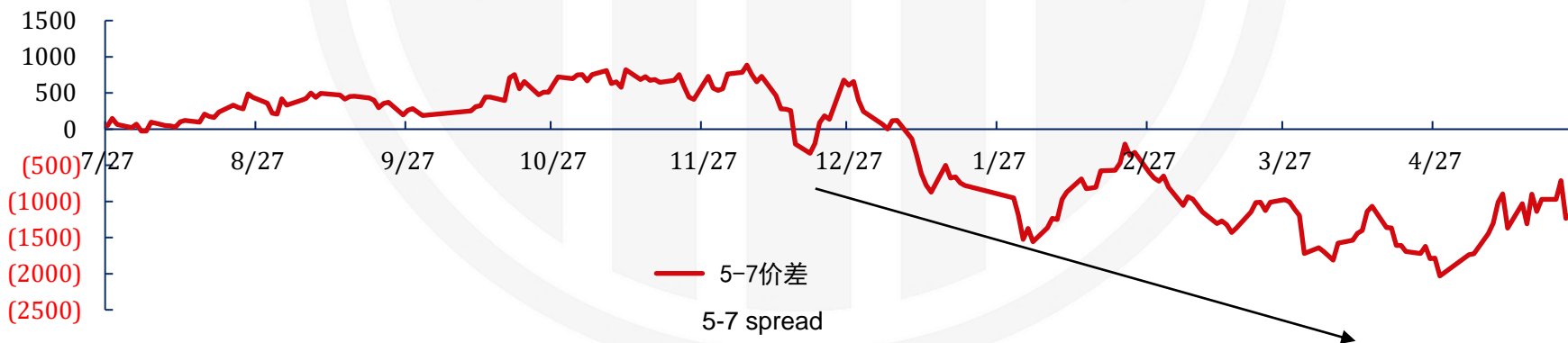
资料来源：Wind 农业部 涌益咨询 卓创资讯 中信期货研究所
Source: Wind, China's Ministry of Agriculture, Yongyi Consulting, Sublime China Information, CITIC Future

5. 4生猪套利：5-7反套

- 2023年，猪价持续磨底，养殖利润不断消耗。在市场对于后市信心不足，未来不确定性较强，近月没有看涨情绪支撑。 In 2023, pig prices continue to grind to the bottom and farming profits continue to deplete. In the market for the lack of confidence in the market, the future uncertainty is strong, there is no bullish sentiment support in recent months.
- 供应端，均重持续高于标准体重段以上，我们认为高存栏+高MSY+高均重，供应压力持续偏高。需求端，上半年消费不及市场预期，白条走货疲软。按照季节性规律，下半年消费整体好于上半年，故我们持续推荐反套策略。
- The supply side, the average weight continues to be higher than the standard weight, we believe that high inventory + high MSY + high average weight, supply pressure continues to be high. The demand side, consumption in the first half of the year is less than the market expected, the pig half carcass sales were weaker. According to seasonal patterns, the second half of the consumption overall better than the first half, so we continue to recommend the reverse cash and carry strategy.

5-7价差持续走缩，反套盈利（元/吨）

5-1 Spread continues to be discounted, reverse cash and carry arbitrage profit (CNY/ton)



资料来源：Wind 农业部 涌益咨询 卓创资讯 中信期货研究所
Source: Wind, China's Ministry of Agriculture, Yongyi Consulting, Sublime China Information, CITIC Future

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