



2023

Management of pig farms under low-cost competition



Science-driven solutions[®]

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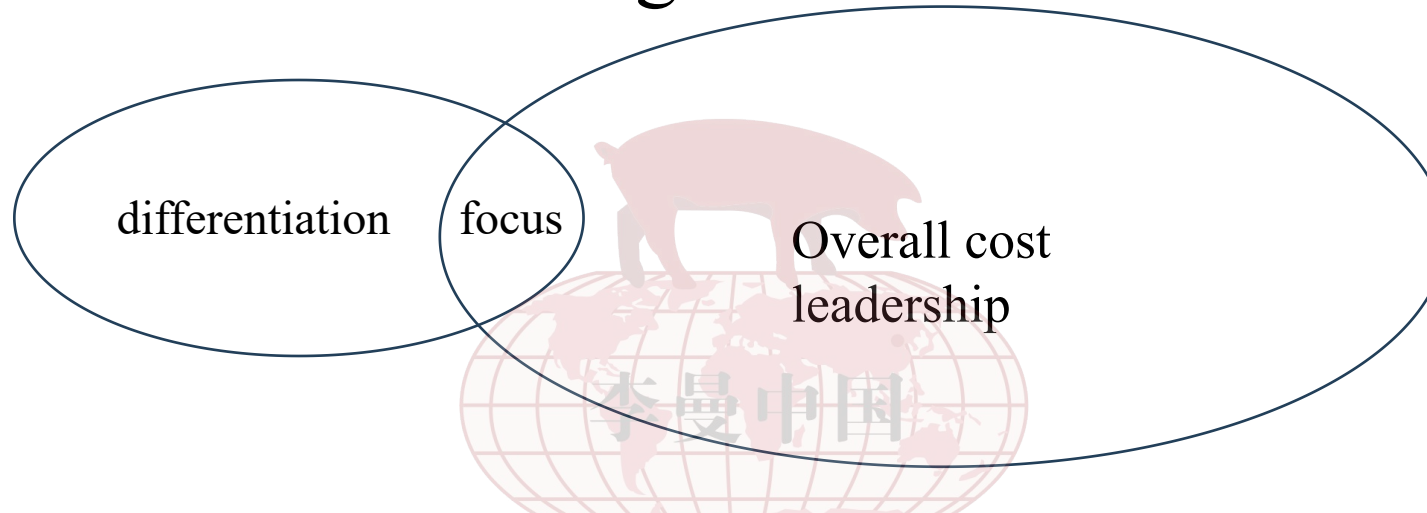
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2 Key Points of Low-Cost Pig Farm Management

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1. Strategic-level planning for pig farm management

◆ Porter's Generic Strategies



- **differentiation:** native breed (policy support, marketing innovation)、mode difference (integration of culture and tourism) and etc.
- **focus:** specialized breeding、specialized fattening、specialized boar semen supply, focus on a specific segment of the farming product.
- **Overall cost leadership (low-cost strategy) :** full-scale industrialized farming throughout the entire supply chain

1. Strategic-level planning for pig farm management



◆ Formulation of Pig Enterprise Strategy

- **Macro Aspects:** National and regional sector planning and related policies, economic development and consumption upgrading, population structure, and consumption habits.
- **Industry Status and Trend Analysis:** Analyzing from the perspective of the upstream and downstream industry chain, market space (overall market space changes, potential markets, regional target markets), changes and trends in farming models, developments and applications of farming technologies, industry co-opetition dynamics (inter-firm collaboration, school-enterprise cooperation, upstream-downstream collaborations, etc.), and integration trends with other industries such as food and finance.

1. Strategic-level planning for pig farm management



- **Analysis of downstream customers:** Including changes in the target market slaughtering capacity and trends, demand on the food side, consumption side, and other product demand side.
- **Regional Peer Analysis:** Analysis of actual regional production capacity, peer strategic planning, product marketing, and channel information.
- **Self-analysis:** financial situation, production capacity and pig population structure, stage production performance and cost space, product strength, market strength, talent team, organizational vitality.
- **Opportunity and risk analysis:** Identify the existing opportunities and risk points from each analysis.

1. Strategic-level planning for pig farm management

Macro Aspects

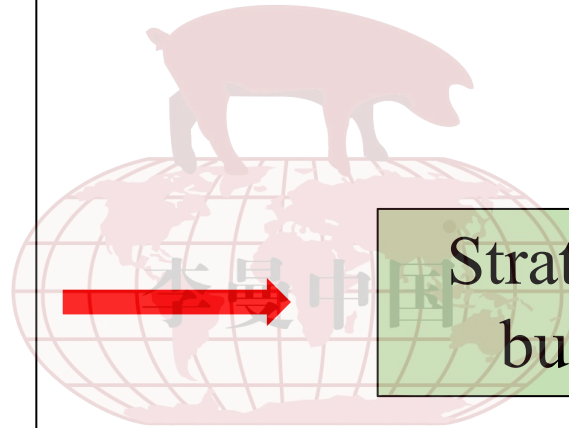
Industry Status and Trend Analysis

Analysis of downstream customers

Regional Peer Analysis

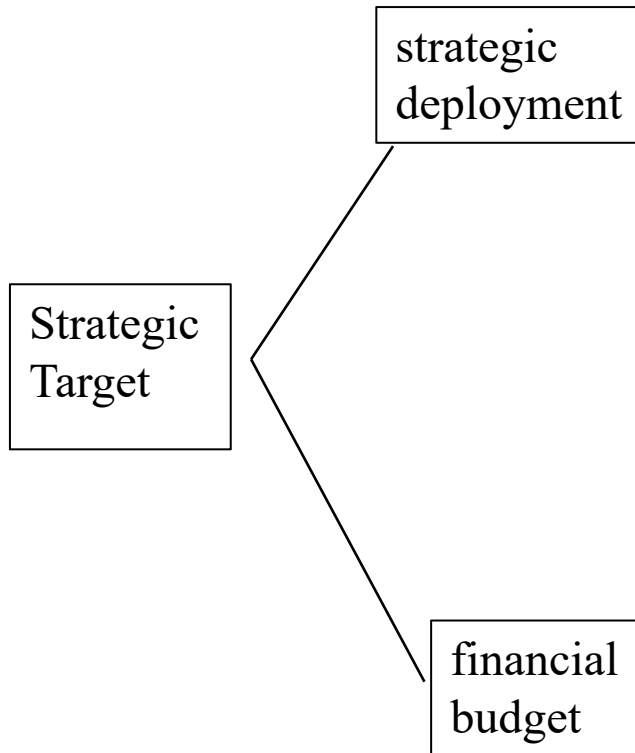
Self-analysis

Opportunity and risk



**Strategic objectives and
business boundaries**

1. Strategic-level planning for pig farm management



Development Steps: Capacity Scale, Industry Chain Planning, Population Planning, etc

Development strategies: epidemic prevention and control, production management, mode adjustment, etc.

Innovation research and development: application of new equipment, study on environmental control in enclosures, innovation in incentive mechanisms and collaboration models.

Key Tasks: Ranking Milestone Events by Importance, Team Organization, Talent Development.

pig production: Setting Production index, Capacity budget.

Production and operation costs: production, management, and marketing expenses.

Research and development, fixed asset investment

Cost of talent development

1. Strategic-level planning for pig farm management

◆ Key factors and strategies affecting efficiency

- **Market factors:** Trend analysis, business design and boundaries
- **Operation factors:** Differentiated products, product portfolio, mode selection, sales rhythm
- **Efficiency factors:** Breeding efficiency of sows、health degree of swine herd (quality) 、 per capita effectiveness
- **Production costs:** Expenses for Seeds, feeds,medications, supplies, labor, depreciation, utilities, and more.
- **Management costs:** Organizational structure、 post setting、 cash flow,etc
- **Sales Costs:** Sales Strategy, quality of brand advertising, sales models.

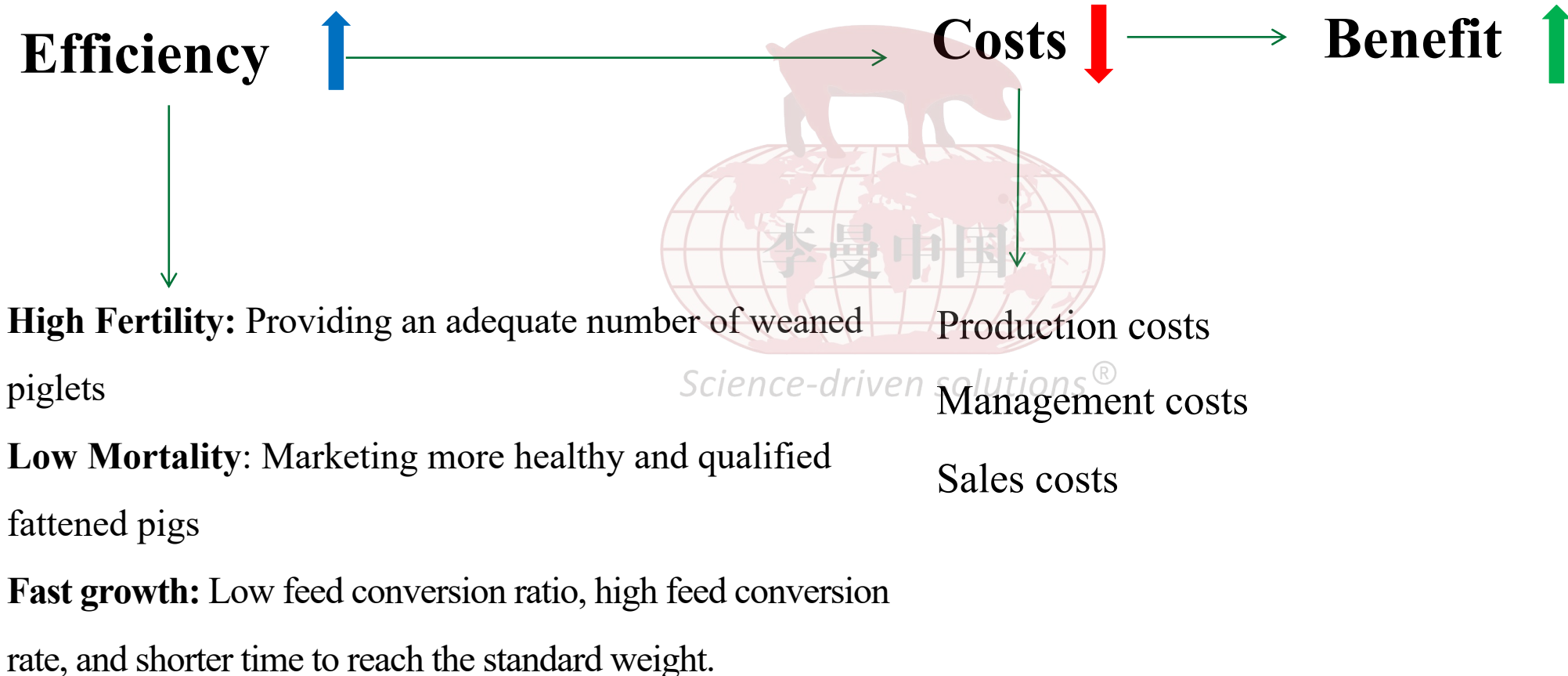
1. Strategic-level planning for pig farm management



Conclusion

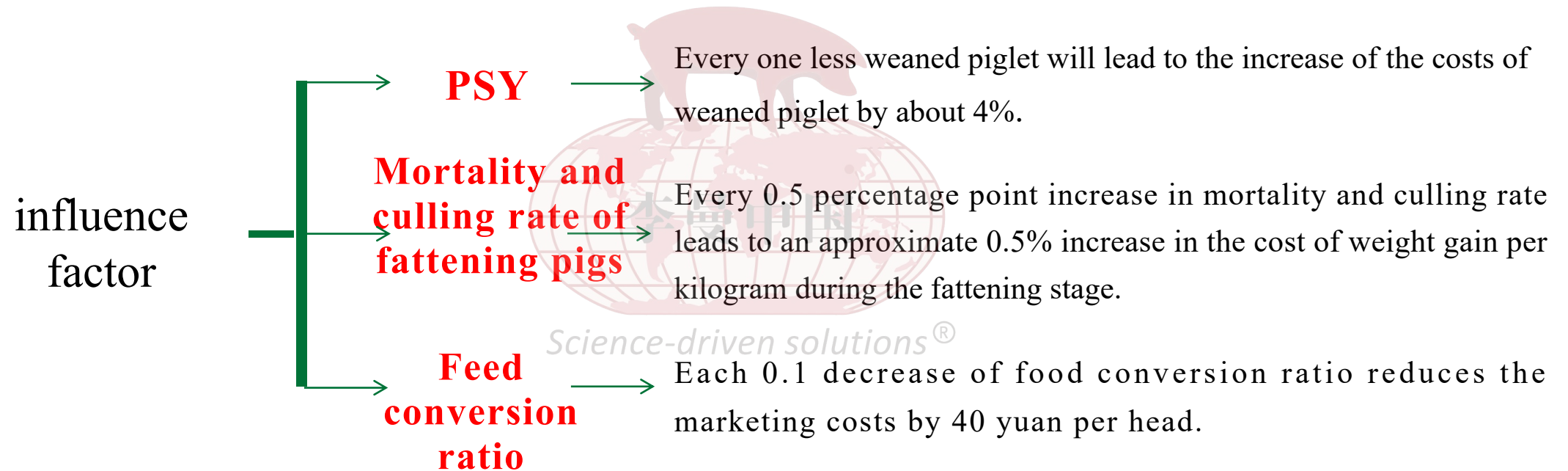
1. The strategic planning of pig farming enterprises determines the direction and scope of costs from a top-level design perspective;
2. Strategic objectives are not easily adjusted, but the pathway of implementation can be adjusted at different stages;
3. The strategic core: the alignment of paths, measures, and resource allocation, particularly through comprehensive bottom-up discussions during annual planning to reach consensus and achieve mutual desires between top and bottom;
4. Course correction, periodic summary, and retrospective analysis during the process of strategic implementation are essential for achieving strategic objectives.

2. Key points of low-cost pig farm management



2. Key points of low-cost pig farm management

1. The impact of production efficiency on costs



2. Key points of low-cost pig farm management



1.1 The Impact of Different PSY on Weaning Costs

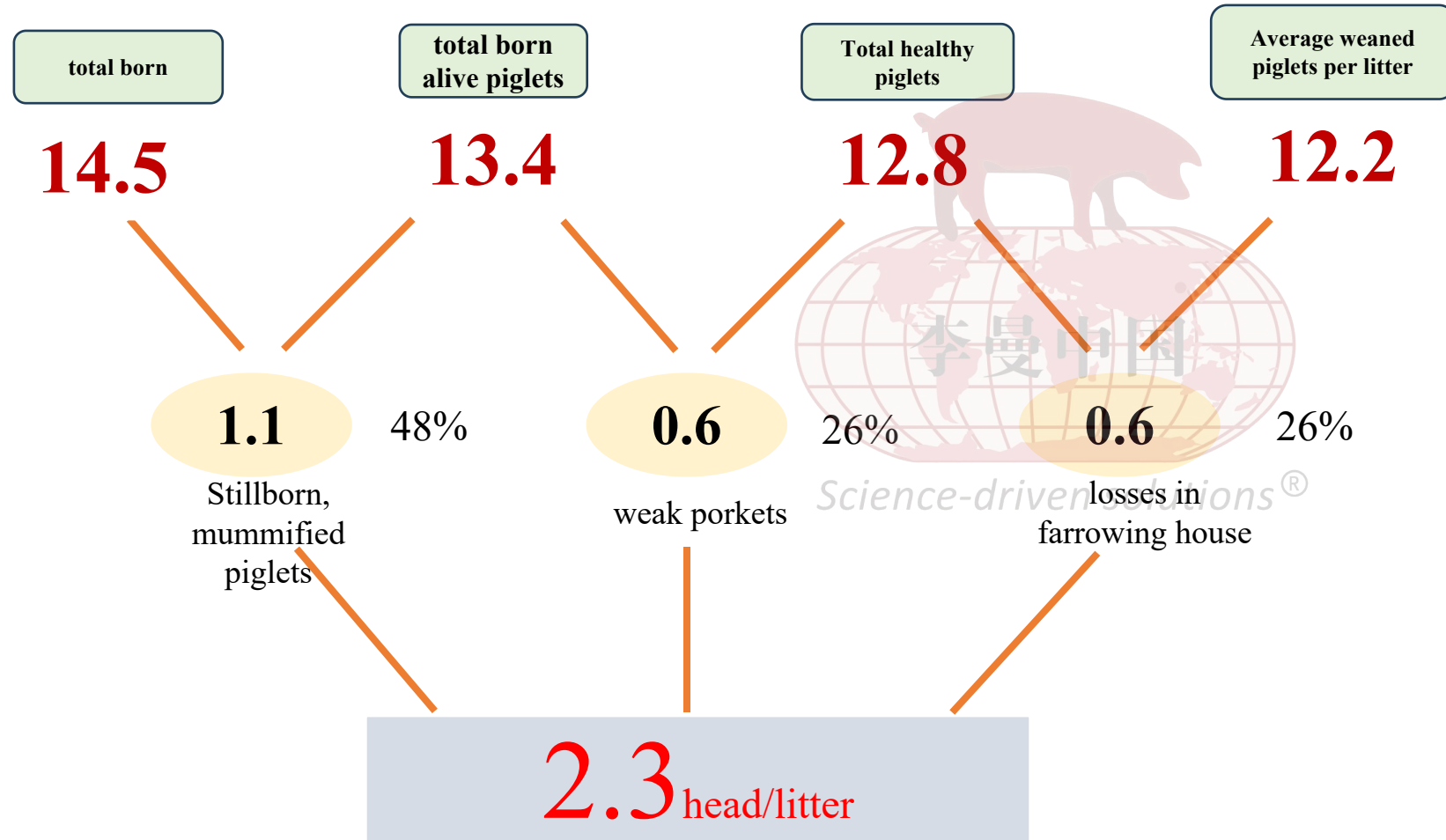
weaned piglets (head)	30	29	28	27	26	25	24	23	22
Average cost per head (yuan)	242.7	251.0	260.0	269.6	280.0	291.2	303.3	316.5	330.9
growth rate	-13.3%	-10.3%	-7.1%	-3.7%	0.0%	4.0%	8.3%	13.0%	18.2%

Note: The data is based on actual figures of Xinjiang in 2022, and the feed prices are calculated according to local raw material prices.

- Based on the current breeding situations in various-scale pig farms, the difference in Piglets Sold per Year (PSY) leads to a cost variation of approximately 100 yuan in piglet production. When calculated, this difference results in a variance of around 0.8 yuan per kilogram in the cost of pigs sold at 120 kilograms.

2. Key points of low-cost pig farm management

Factors influencing PSY - Average number of weaned piglets per litter

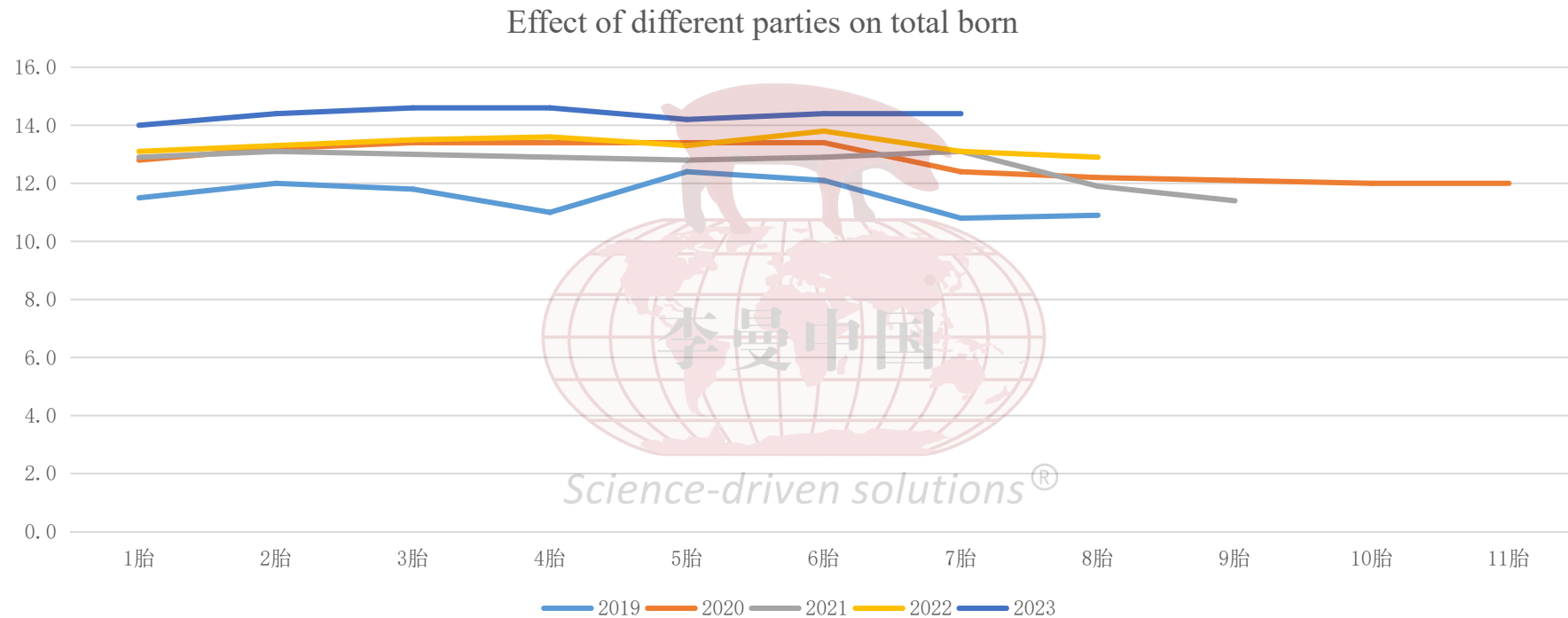


- 60-70% of the losses occur during the pregnancy stage
- 30-40% of the losses occur in the farrowing room
- The key to improving the total born and alive piglet indices lies in the management of mating, backfat, nutrition, daily routines, and disease during the gestation period
- The quality and quantity of weaned piglets in the farrowing room are determined by farrowing assistance, prevention of being crushed into deaths, care of weak piglets, and feed intake management
- Sows with high gestational ages are weeded out to optimize the gestational age structure

Note: The data is based on actual figures of Xinjiang in 2022.

2. Key points of low-cost pig farm management

◆ Reasonable structure of gestational age of pig population



- Through data analysis, it has been observed that there is a varying degree of decline in total born for sows with parity 7 and above. Furthermore, these high-parity sows account for more than 56% of the total mismatch ratio during production. Therefore, it is necessary to cull sows with parity 7 and above when there is an adequate supply of replacement gilts.

2. Key points of low-cost pig farm management

◆ The effect of backfat thickness on the conception rate of sows in reserve.

The backfat of reserve pigs before conception (mm)	conception rate	The difference in conception rates leading to direct feed cost wastage (using 100 matings as an example)
<12	89.80%	2621
13-16	94.32%	0
17-20	91.40%	1693
>20	87.50%	3955

Note: The data is based on actual figures of Xinjiang in 2022, and the feed prices are calculated according to local raw material prices.

- Inadequate feeding and backfat management during the reserve stage can lead to a decrease in the conception rate of breeding sows. For a pig farm with ten thousand sows, the direct cost of feed wastage due to poor backfat management resulting in mismatches amounts to over 1.1-1.4 million annually.

II. Key points of low-cost pig farm management

◆ Effect of backfat on efficiency in reserve sows

First Fetal Perinatal backfat (mm)	Mean labor (min)	Total healthy baby (head)	Birth weight (kg)	Dead+weak (%)	Litter weaning number (head)	Weaning litter weight (kg)	Cost Comparison of Weaned Piglets with Average Head (RMB)	Weaning-Estrus Mating Interval (D)
14-16	237	13.14	15.90	9.2	12.09	74.95	266	7.88
17-19	205	14.26	17.11	6.8	13.12	85.93	252	6.43
>20	272	11.78	12.84	12.4	10.84	65.04	294	9.77

Note: Data are from actual data of a pig farm in Xinjiang in 2022[®]

- Backfat management of reserve sows has a positive correlation with sow efficiency, and maintaining reasonable backfat values in reserve sows and during gestation could improve sow efficiency and service life.

II. Key points of low-cost pig farm management



Influencing Factors of PSY—Annual Fetal Frequency

Annual
birth
times

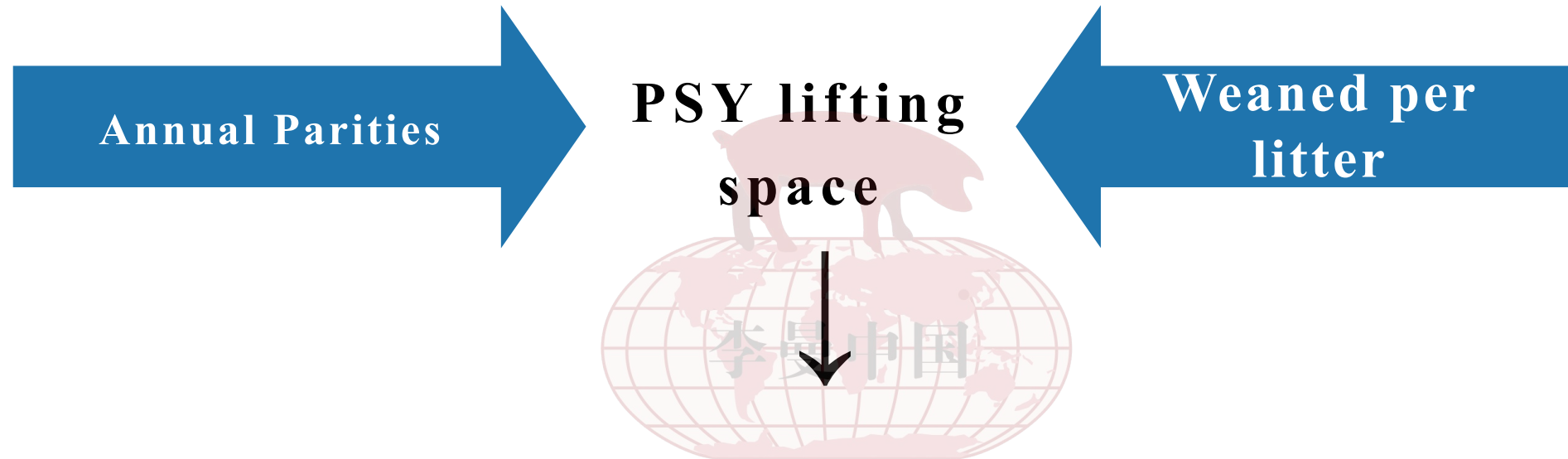
Farrowing rate
of mated sow

NPD



- Abortion, death and disease management and production management are directly related;
- Empty bosom, re-service and operation skills and operation execution are related;
- Timely elimination of inefficient sows and abnormal sows.

II. Key points of low-cost pig farm management



Each time PSY raises 1 head, the weaning cost decreases by 12-20 yuan.

II. Key points of low-cost pig farm management

1.2 Effect of slaughter rate on fattening cost

		5%	6%	7%	8%	9%	10%
Number of weaned piglets (head)	26						
Mortality and culling rate of fattening pig	4%	5%	6%	7%	8%	9%	10%
Fattening pigs sold (head)	25.0	24.7	24.4	24.2	23.9	23.7	23.4
Production cost (yuan /kg)	12.30	12.43	12.56	12.70	12.83	12.98	13.12
120kg cost	Cost increase ratio	1.05%	2.13%	3.23%	4.35%	5.49%	6.67%

Note: feed price is calculated according to Xinjiang raw material price in 2023

II. Key points of low-cost pig farm management



1.3 Feed conversion rate on fattening cost

FCR \ Feed price	2.4	2.5	2.6	2.7	2.8	2.9	three	3.1	3.2
3.25	6.70	6.97	7.25	7.53	7.81	8.09	8.37	8.65	8.93
3.3	6.80	7.08	7.36	7.65	7.93	8.21	8.50	8.78	9.06
3.35	6.90	7.19	7.48	7.76	8.05	8.34	8.63	8.91	9.20
3.4	7.00	7.30	7.59	7.88	8.17	8.46	8.76	9.05	9.34
3.45	7.11	7.40	7.70	8.00	8.29	8.59	8.88	9.18	9.48
3.5	7.21	7.51	7.81	8.11	8.41	8.71	9.01	9.31	9.61
3.55	7.31	7.62	7.92	8.23	8.53	8.84	9.14	9.45	9.75
3.6	7.42	7.73	8.03	8.34	8.65	8.96	9.27	9.58	9.89
3.65	7.52	7.83	8.15	8.46	8.77	9.09	9.40	9.71	10.03
3.7	7.62	7.94	8.26	8.57	8.89	9.21	9.53	9.85	10.16

Note: feed price is calculated according to Xinjiang raw material price in 2023

II. Key points of low-cost pig farm management

Key points of cost control for fattening pigs

Feed cost optimization

- Reasonable feed formula
- Control stage feed amount
- Reduce waste
- Use of real estate raw materials

Improve feed conversion rate

- Suitable enclosure environment
- Selecting proper feed additives
- Material type and feeding mode
- Reasonable arrangement of feeding time



Optimizing pig population structure

- Selecting excellent pig seedling varieties
- Sectional feeding
- Early elimination
- Reasonable age, weight sales

Health control

- Epidemic prevention and health care
- Reasonable deworming
- Monitor herd health
- bio-safety

II. Key points of low-cost pig farm management

2. Pig farm health management

Factors contributing to the cost of illness include:

- **Pig Death---Increased Production Costs**
- **Pig Suffering---Low Value of Elimination of Pigs**
- **Reduced feed conversion efficiency**
- **Slow growth of pig-low daily gain**
- **Increasing incidence of other diseases**
- **Rising labour costs**
- **Rising costs of medicines and vaccines**
- **Rising management costs**
- **Rising feed costs**

疾病/病原体	由疾病引起的死亡率	
	急性期	慢性期
胸膜肺炎放线杆菌	3%~30%	2%~4%
支原体(地方性)肺炎	2%~14%母猪	高达3%生长猪
PMWS/PCVAD	25%~50%生长猪	8%~12%生长猪
猪细小病毒性不孕	0.5~4头/窝	0.5~1头/窝
猪呼吸道疾病综合征 (PRDC)	3%~10%断奶猪和生长猪	2%~8%断奶猪和生长猪
进行性萎缩性鼻炎 (PAR)	1%~5%断奶猪	猪1%
PRRSV	5%~30%仔猪	0~1头/窝
链球菌脑膜炎	4%~12%断奶猪	1%~5%
猪痢疾	1%~4%断奶猪和生长猪	1%~15%
TGE/PED	90%~100%断奶猪和生长猪	1%~4%

Table 1 Consequences and subsequent effects of a novel disease in swine

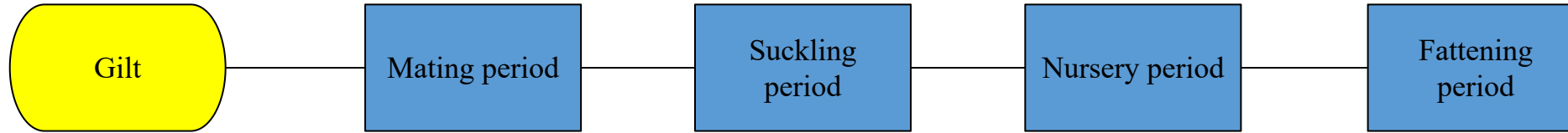
疾病/病原体	急性发病期		慢性发病期	
	损失的FCE	达到体重100kg损失的天数(d)	损失的FCE	达体重100kg损失的天数(d)
胸膜肺炎放线杆菌 (App)	0.1~0.4	7~30	0.1~0.3	4~15
疥癣	0.1	7~18	0.1	5~8
支原体(地方性)肺炎	0.1~0.4	10~21	0.05~0.1	3~21
猪呼吸道疾病综合征 (PRDC)	0.1~0.4	7~30	0.1~0.3	7~28
进行性萎缩性鼻炎 (PAR)	0.1~0.2	4~15	0.1~0.2	4~15
链球菌脑膜炎(SM)	0.05	1~3	0.05	0
猪痢疾(SD)	0.1~0.3	5~20	0.3	4~5
TGE/PED	0.1	4~10	0~0.15	0~3

Table 2 shows the ongoing impact on production after the acute disease has subsided

状况或疾病	死亡率和淘汰率	生产性能损失	记载的疾病水平	目标水平
流产		230头仔猪	11%	1%
奥耶斯基病/伪狂犬病毒	375头猪	FCE和日增重	高	0
被母猪压死	76头猪	损失饲料毛利	4%	1%
分娩率		615头猪	70%	89%
肥育损失	125头猪	损失饲料毛利+饲料成本	7%	15%
口蹄疫	扑杀政策	100%		
不育性病毒	402头仔猪	损失饲料毛利; 繁殖	高	0
非感染性不育	410头猪	损失饲料毛利	分娩率	89%
非妊娠母猪	...	92头猪	6%	2%
仔猪死亡	...	177头猪	15%	8%
仔猪腹泻	50头猪	损失饲料毛利	25%	0.5%
肺炎综合征	2%~6%	FCE和日增重	不定	0
生存能力差	163头猪	损失饲料毛利	35%	1%
断奶后损失	148头猪	损失饲料毛利+饲料成本	8%	15%
进行性萎缩性鼻炎	2%	FCE和日增重	高	0
重复交配		106头仔猪	17%	6%~8%
猪水泡病	扑杀	100%		
猪瘟	扑杀	100%		
猪痢疾	1%	FCE和日增重	低	0
死胎		84头猪	8%	5%
传染性胃肠炎	315头猪	10~14d生长	高	0

Table 3 Loss of Performance Due to Disease per 100 Sows and 2000 Offspring Growing up to 100kg for 12 Months

II. Key points of low-cost pig farm management



Bio-safety

- Gilt management
- Immunization
- Healthcare
- Medication
- Production control

Critical illness

ASF prevention and control

PRRS

Porcine circovirus (PCV)

Diarrhea

Streptococcus

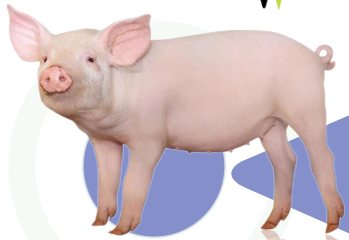
Ileitis

HPS

PCP

Science-driven solutions®

Disease elimination



Quarantine

Acclimation

Test

Mating

Introduction of gilt
80-150 days old
3 lots

Immunization, acclimation (PED/PRRS)60 days
140-210 days of age

Pre-entry detection
Oral fluid PRRS-&PED-

Transfer to mate
210 days old can mate
Introduced once every 3 months.



后备猪
管理

- ① 引种标准、驯化标准
- ② 检测标准、入群标准



免疫保健
治疗

- ① 免疫保健方案
- ② 抗原抗体药敏

II. Key points of low-cost pig farm management



3. Organizational management

- **Specialization of technical teams**

Segment and match personnel for professional and technical positions involving cost and efficiency in various production sections, environmental control, nutrition, breeding, environmental protection, equipment, health management, etc., responsible for technology research and development, process and system formulation and optimization, process supervision, and empowerment, guided by “specialization, precision and depth” of technology;

- **Management team**

The general manager of the area and the director of the base have strong management, operation and certain technical capabilities. The management ability is greater than the skill level. The core is to stimulate employees’ initiative, sensitivity to numbers, depth of thinking and control of costs and resources with the orientation of coordination;

- **Operations and functions**

In addition to personnel, finance, procurement, sales and other departments, the operation department of the information collection, strategic path of the process tracking, market analysis, sales advice and use of financial products, etc., are a strong guarantee for pig farm management and cost reduction.

II. Key points of low-cost pig farm management



4 Incentive mechanism and cooperation mode

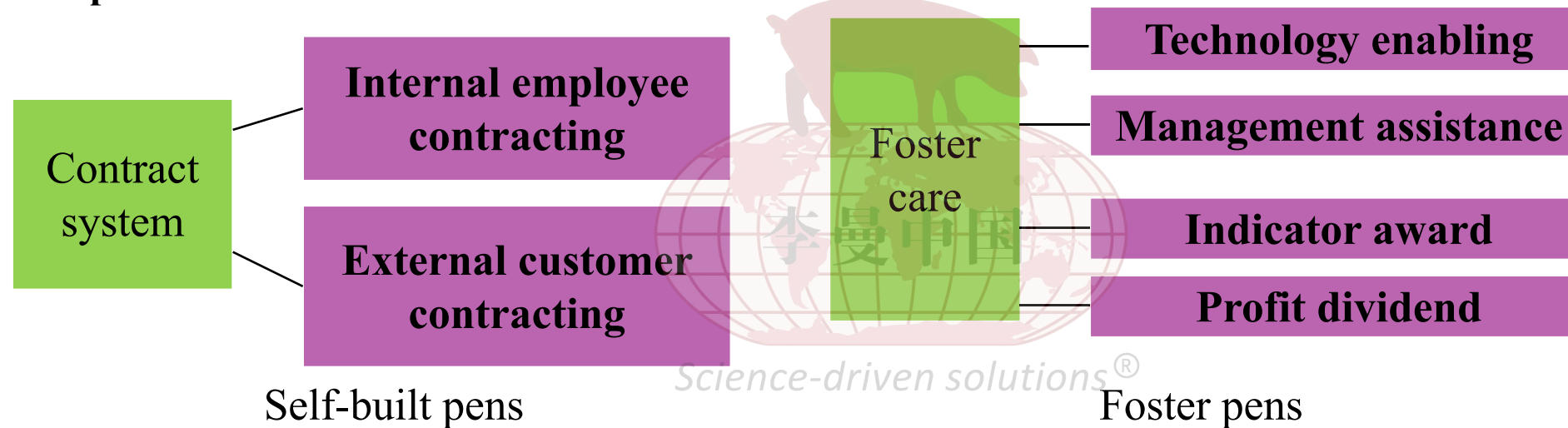
4.1 Employee level

- **Performance incentives:** indicator incentives, focusing on timeliness, in accordance with the batch cash
- **Value-added incentives:** incentives to reduce costs, lower than the cost of part of the value-added, annual incentives, focusing on medium-and long-term incentives
- **Equity incentive:** covering 20% of all employees (team leaders and above core cadres), participating in the annual dividend
- **Other incentives:** phased ranking incentive, the implementation of the happy points system (focusing on spiritual incentives), the combination of material and **spiritual incentives**

II. Key points of low-cost pig farm management

4 Incentive mechanism and cooperation mode

4.2 Cooperative mode of foster care



Solve the problem of who raises pigs for employees, and stimulate the entrepreneurial passion and potential of employees

Help customers to improve the index to reduce costs, improve the generation of revenue in order to be stable and sustainable

III. Summary



- Business is defined by strategy, process is defined by business, organization is defined by process, position is defined by organization, indicator is defined by position, and performance is defined by indicator.
- Lay the cost potential space by strategically guiding the business direction, and continuously tap the potential by managing the activation team.
- Low-cost pig farm management needs to return to the “people-oriented” management, through the elite team to create “swine herd of good quality”.

Thanks for your attention!

Xinjiang Tycoon Group Co., Ltd.

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