



TPM Activity Report

Linhe Plant, Youran Husbandry Co., Ltd.



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1.1 Profile



Bayannur City



Linhe Plant

■ Bayannur City

Location: Located in the west of the Inner Mongolia Autonomous Region, Bayannur is long known as a **Pearl of the Yellow River** for its fertile soil and unique location.

Area: 640,000 square kilometers **Population:** 1.76 million

Traffic: Airport, railway, expressway

Resources: Abundant mineral resources

■ Linhe Plant

Location: Bayannur Economic Development Zone

Area: 66,700 square meters

Capital: 35 million Yuan

Number of employees: 96

1.2 Milestones



July 2007: Start of operation



February 2018: Start production of sheep feeds



June 2020: Start production of beef cattle feeds



August 2022: Sales volume exceeded 10,000 tons



June 2017: Company of Remarkable Performance



April 2019: Model Company of Feed Quality Management



March 2021: Passed ISO9000 certification





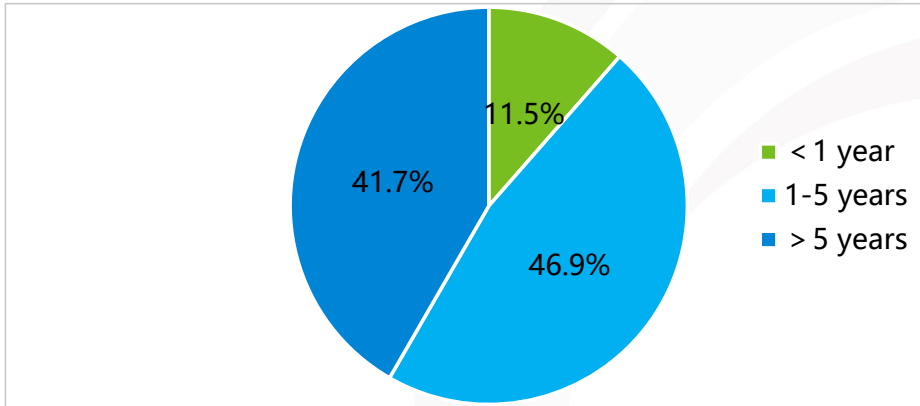
1.3 Organizational Structure



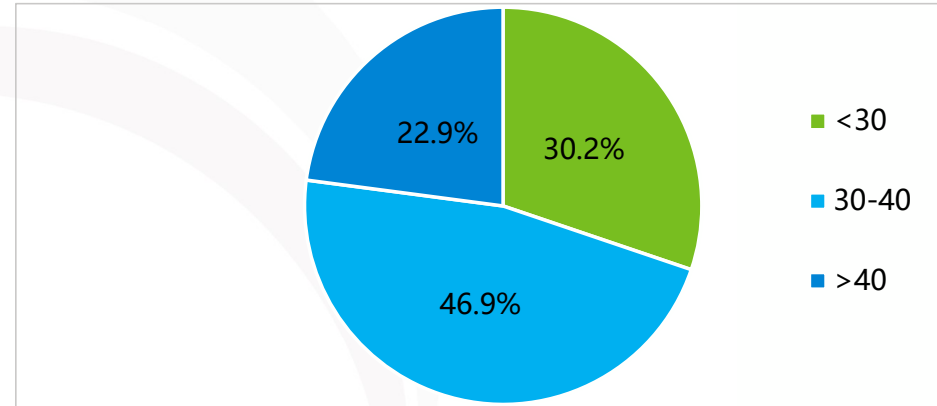
1.4 Employees



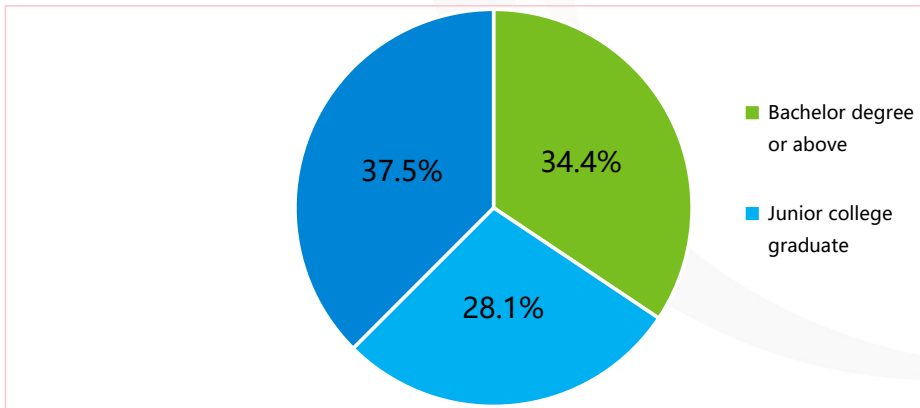
Years of service 41.7% have served for 5 years or above



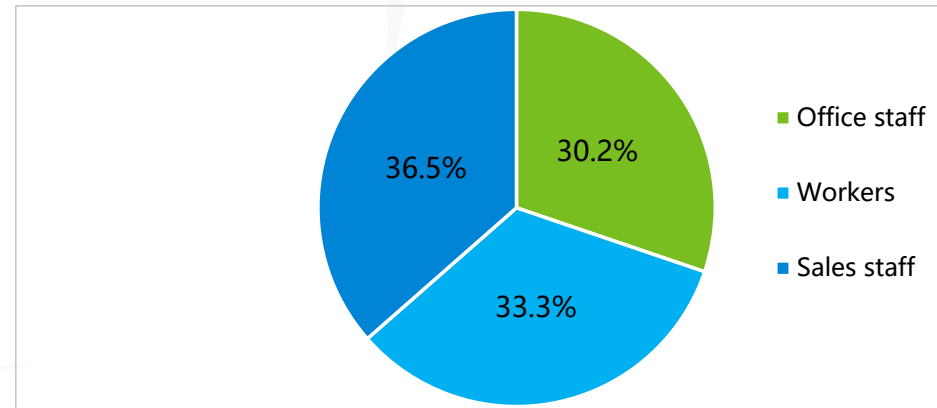
Age 77.1% are less than 40



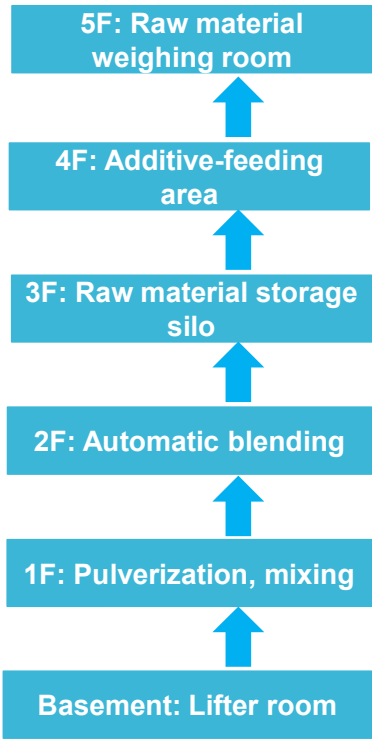
Education 34.4% are college graduates



Composition 69.8% are production/sales staff



1.6 Manufacturing Process



- Equipment: Bühler, Zheng Cang, Feng Shang
- Line: 1
- Capacity: 120,000 tons/year



1.8 Products



Feeds



Feed products: 118

No.	Item	Category
1	Miruyuan 4818 - concentrate supplement for camels in lactation period	Camel feed
2	Rubeiyou 9505 - 5% compound premixed feed for peripartum cows	Dairy cow feed
3	Rubeiyou 9305 - 5% compound premixed feed for growing cows	Dairy cow feed
4	Kang Shun Bao 13X - Concentrate supplementary feeds for dairy cows in dry period (new upgrade)	Dairy cow feed
5	Rubeiyou 9805 - 5% compound premixed feed for lactating cows	Dairy cow feed
76	Xiletege 5435 - 30% concentrated feed for fattening sheep (powder)	Sheep feed
77	Xiletege 5435 - 30% concentrated feed for fattening sheep	Sheep feed
78	Xiletege 5730 - 30% concentrated feed for ewes	Sheep feed

Raw materials



Raw materials: 16

No.	Name
1	43% protein soybean meal
2	Imported standard-grade alfalfa
3	Imported premium alfalfa
4	Cottonseed
5	Beet pellet meal
6	Corn flake (third grade)
7	Stone powder
10	Cottonseed meal
14	Sodium bicarbonate
15	Domestic first-grade alfalfa
16	High fat DDGS

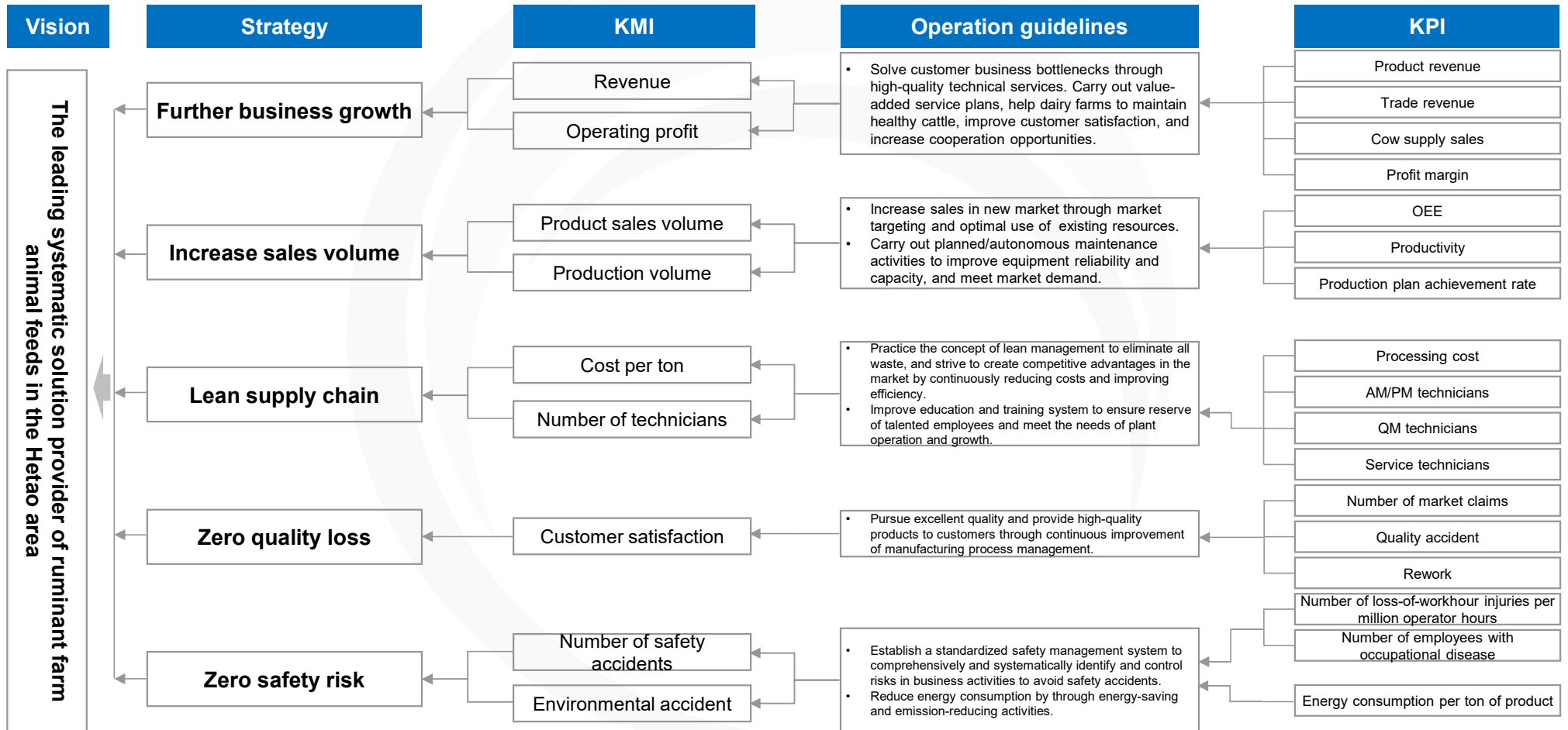
Dairy supplies



Dairy supplies: 471

No.	Item
1	Aflatoxin M1 rapid detection test strip (detection limit ≤ 0.05) (Lvshiyuan)
2	Baiqiuqing (Lebenben) 1000ml
3	Juyoudian (Wen's post-bath solution)
4	Feed spreader 12m ³ (Youhong)
5	Meian cow blood ketone test strips (Dizhun)
6	(Dingli) Inspection Tray
249	(Liquid Pfite) Acid cleaning solution 200 liters
250	(LEffect) Acid cleaning solution 20 liters
251	Latent Mastitis Detection Solution (Concentrate) (Traditional Chinese Veterinary Medicine)

1.9 Plant Strategies



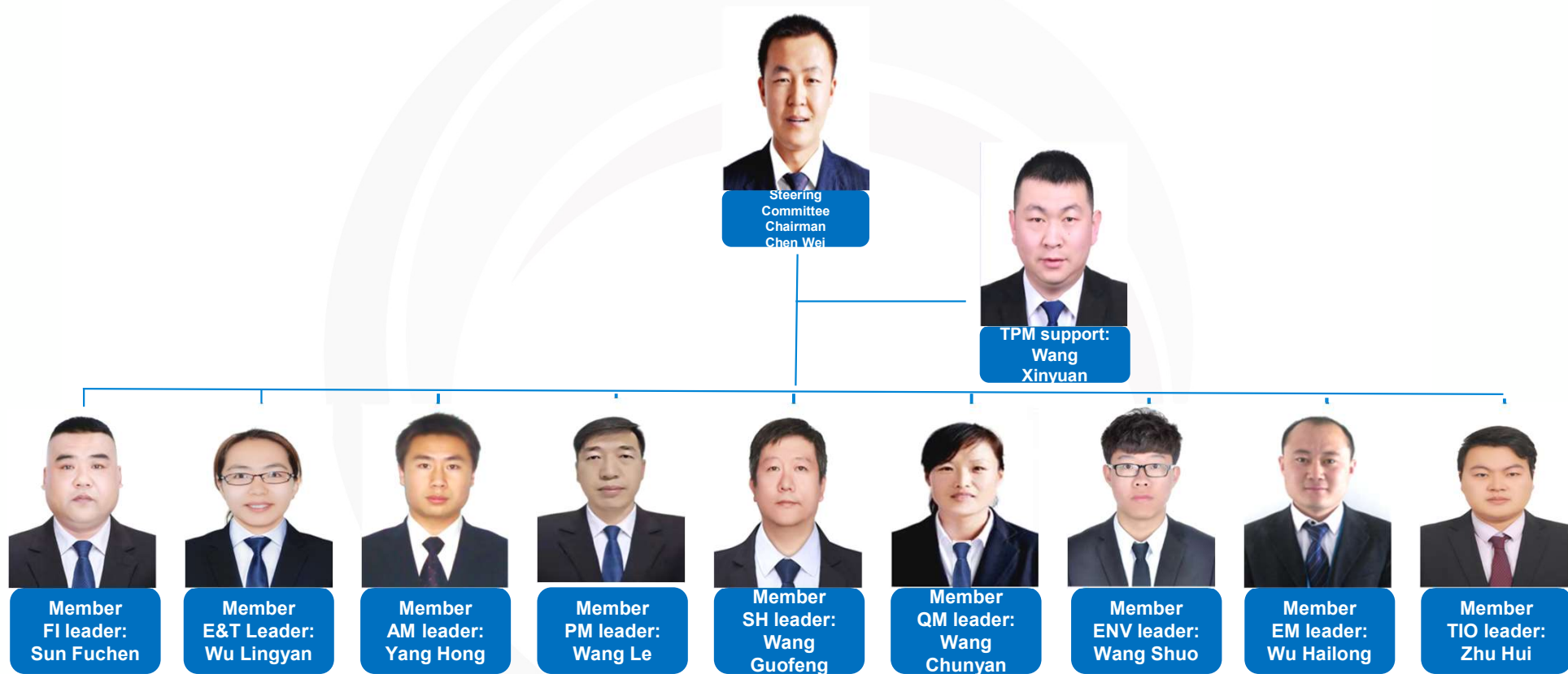
1.10 Strategy Deployment by Pillars



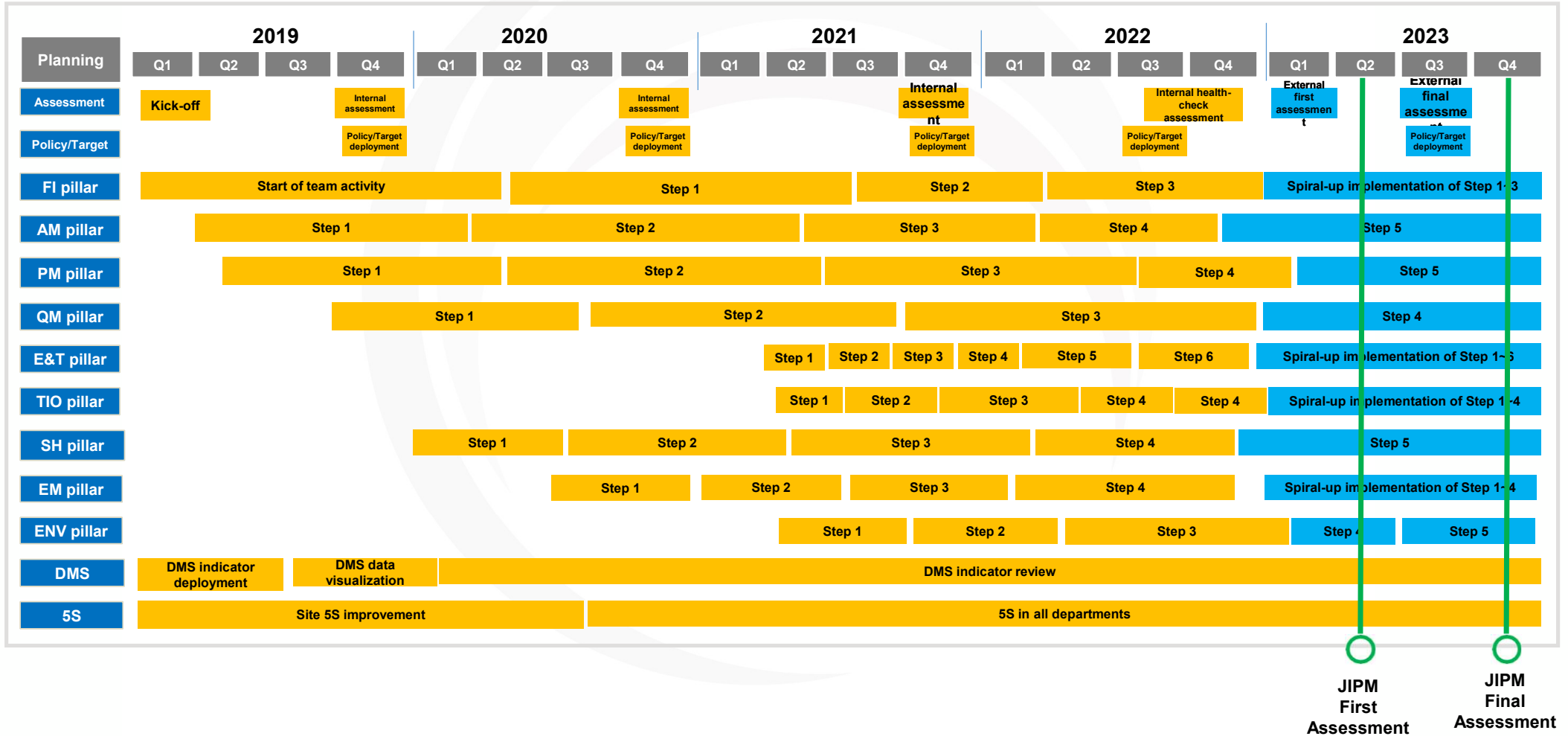
Vision	Optimal strategy	Indicator	FI	AM	PM	QM	E&T	SH	ENV	TIO	EM	
The leading systematic solution provider of ruminant farm animal feeds in the Hetao area	Further business growth	Revenue	•									
		Operating profit	•									
		Product revenue	•									
		Trade revenue	•									
		Cow supply sales	•									
		Profit margin	•									
	Increase sales volume	Product sales volume	•								•	
		Production volume	•		○	○					○	○
		OEE	•		○	○					○	○
		Productivity	•			○						
		Production plan achievement rate	•									
	Lean supply chain	Cost per ton	•			○	○					
		Number of technicians			○	○		•				
		Processing cost	•			○	○				○	
		AM/PM technicians			•	•		•				
		QM technicians						•				
		Service technicians						•				
	Zero quality loss	Customer satisfaction					•					○
		Number of market claims					•					○
		Quality accident					•					
		Rework					•					
	Zero safety risk	Number of safety accidents							•			
		Environmental accident								•		
Number of loss-of-workhour injuries per million operator hours								•				
Number of employees with occupational disease								•				
Energy consumption per ton of product									•	Main task	Supporting task	



1.11 TPM Organization



1.12 TPM Activity Plan



1.13 TPM Activity - Steering Committee



1. Internal/external environment analysis

PEST	Item	Challenge (provision)	Opportunity?	Threat?	Countermeasure
P (policy)	China Veterinary Drug Administration enhanced inspections	No use of antibiotics		√	Introduce non-antibiotics drugs despite of higher mortality rate
	Announcement released by the Agriculture, Rural Animal Husbandry and Veterinary Bureau at the 13th National People's Congress	Promote returning of manure to farmland and provide subsidies for installing solid-liquid separation equipment	√		Upgrade existing environmental protection facilities, carry out special projects and find resources, and acquire subsidies.
	Environmental protection policies issued by Inner Mongolia Autonomous Region	Environmental protection regulations are becoming increasingly strict		√	Upgrade of environmental protection facilities and improvement of environmental emergency response mechanism
S (society)	Dairy industry support project of Inner Mongolia Autonomous Region	The government grants subsidies to farms using local high-quality oat and alfalfa grass	√		Reduce cost through proper planning of cattle herds and use of local crude feeds
	Notice by Beijing Health Commission	2 plague patients identified in Beijing		√	Plague is a type A disease and the epidemic situation in dairy farms is severe
T (technology)	There is plenty of land resource surrounding the farm	Abundant land resource and large silage planting area	√		Short transportation distance, good quality
	Dairy industry support project of Inner Mongolia Autonomous Region	Enhance training of technicians	√		Improve skills and know-how

2. Discussion



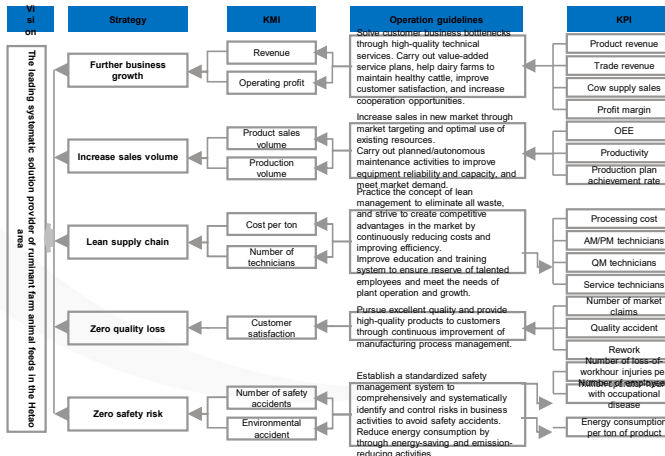
3. SWOT analysis

Internal resources And capabilities	S: Strength	W: Weakness
External Opportunities and threats	<ol style="list-style-type: none"> 1. We have unparalleled advantages in sales channels of cow feeds 2. Our professional skills in dairy farming are gradually recognized by customers 3. We have established a sound quality management system 	<ol style="list-style-type: none"> 1. Too dependent on existing sales channels and weak in marketing. 2. Less competitive edge in other feeds (such as sheep feeds) 3. The collection cycle of accounts receivable is long, which affects long-term growth. 4. Capacity can not meet market demand. 5. Supply chain management is weaker than competitors.
O: opportunity	<ol style="list-style-type: none"> 1. The government has issued policies to promote the husbandry industry. As a result, the number of ruminant livestock and demand for feeds are increasing. 2. Many dairy farms need technical services and the prospect of the husbandry industry is optimistic. 3. Transformation of farms (into large-scale breeding) also requires technical services. 	<ol style="list-style-type: none"> 1. Focus on building sales channels other than cow feeds (such as sheep feeds) 2. Improve collection of account receivables 3. Increase capacity to meet market demand 4. Improve supply chain management
T: Threat	<ol style="list-style-type: none"> 1. Affected by the international and domestic situations (trade war, epidemic), all the cost of raw materials continues to rise, resulting in an increase in production costs and decrease of profitability. 2. As a well-known area of farming, sheep breeding, the Hetao region has attracted many feed companies. As a result, competition in the sheep feed market is intense. 3. Many large-scale farms started to use home-made feeds, resulting in a slowdown of feed product sales. 4. Low sales volume of sheep feeds may have a negative influence on our reputation in cow feed market. 5. The government's continuous call for carbon reduction and green farming, and requirement on green supervision, there is a big gap between the plant's operating conditions and the group's standardized quality practices, food safety, quality management, environmental protection. 	<ol style="list-style-type: none"> 1. Utilize the advantage of YouRan Group in central government 2. Continuously expand the market 3. Maintain leadership in technical services 4. Adapt to the trend of home-made feeds by providing product portfolio and providing sales and sale after-sales feeds. 5. Breakthrough with competitors in sheep feeds and establish our competitive edge in short cattle feeds. 6. Implement the dual carbon strategy of YouRan Group and create green factory

6. Target deployment

Performance indicator	Unit	2020 baseline	2021 actual	2022	2023		2024 target	2025 target
					Target	Actual		
Revenue	RMB 100 million	4.19	5.41	6.68	7.25	4.12	7.48	8.62
Operating profit	RMB 100 million	0.25	0.29	0.44	0.48	0.44	0.5	0.55
Product revenue	RMB 100 million	2.73	3.43	4.63	4.85	3.17	5.07	6.01
Trade revenue	RMB 100 million	1.1	1.6	1.7	1.84	0.6	1	1.3
Cow supply sales	RMB 100 million	0.24	0.33	0.46	0.51	0.35	0.62	0.7
Profit margin	%	5.4	6.3	6.6	7	10.87	7.2	7.5

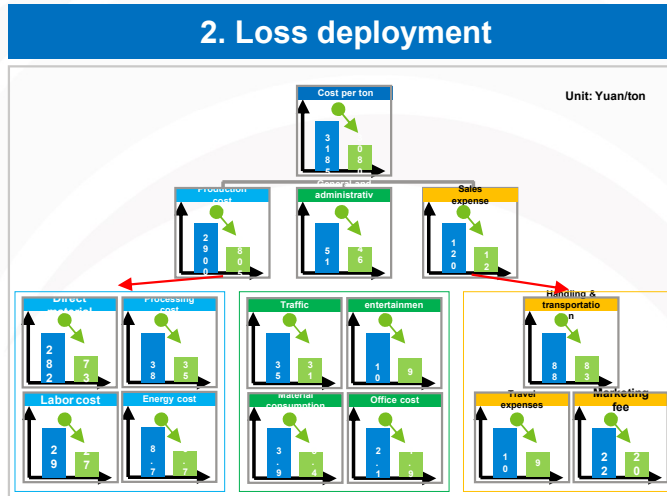
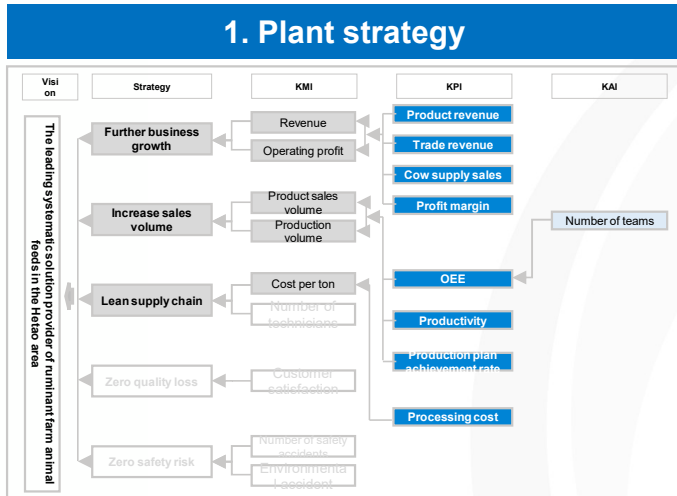
5. Indicator deployment



5. Decide the optimal strategies



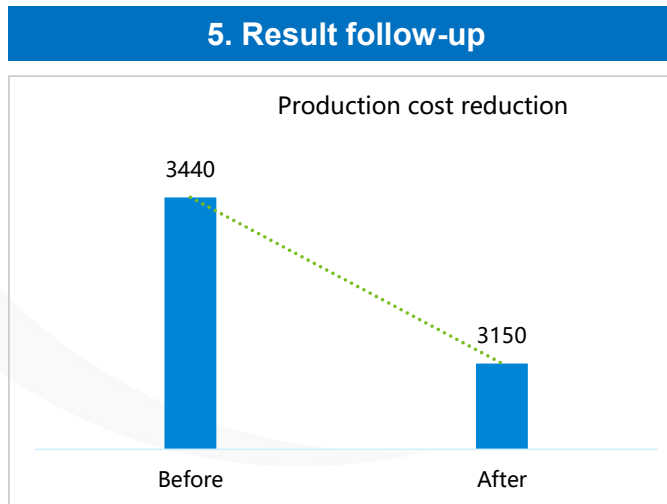
1.14 TPM Activity - Pillars



3. Action plan & team establishment

Category	No.	Action/Team	Action/Team	Pillar	Expected result	Deadline
Capacity increase	1	OEM production	Quick action	FI	Monthly OEM production: 1,700 tons	July 2023
	2	Quick action to improve bottle-neck equipment	Quick action	AM	Upgrade of pelletizer	September 2023
Improve ment of efficiency	3	Dispenser signal improvement	Improvement team	PM	Zero breakdown	October 2023
	4	Increase mixing proportion of mixer	Improvement team	FI	Increase of monthly production by 200 tons	October 2023
Reduced cost	5	Product delivery cost reduction	Quick action	TIO	Decrease of production cost by 5%	December 2023
	6	Decrease of material procurement cost	Improvement team	FI	Decrease of production cost by 150 Yuan	October 2023
	7	Improvement of protein content of feed product	Improvement team	QM	Annual saving: 1.2 million Yuan	November 2023
	21	Installation of 2 bulk silos (20 tons each, total 40 tons)	Quick action	FI	Decrease of processing cost by 1 Yuan/ton	October 2023

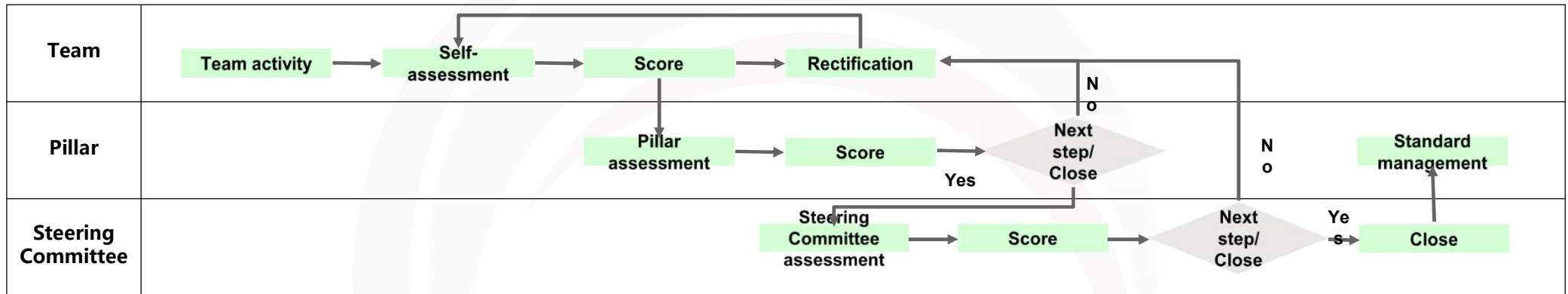
6. Horizontal deployment



1.15 TPM Activity - Teams



3-level assessment flow



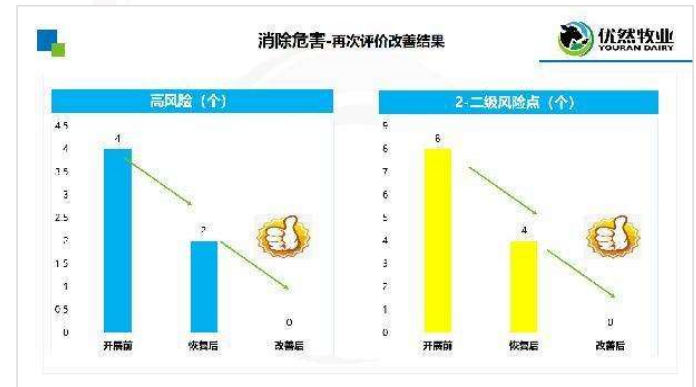
1- Team establishment

2- Activity management

3- Result management

小组成员及职责

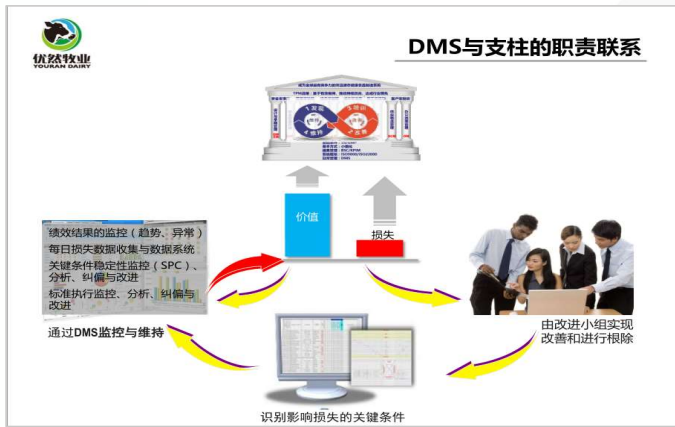
 姓名: 赵高 角色: 组长 岗位: 车间主任 职责: 1.负责小组的日常运营 2.对小组的绩效、质量、目标负责	 姓名: 王卫强 角色: 成员 岗位: 安全经理 职责: 1.定期参与小组活动 2.监督小组的安全	 姓名: 王旭欣 角色: 成员 岗位: 维修组长 职责: 1.定期参与小组活动 2.监督小组的设备	 姓名: 张旭 角色: 成员 岗位: 车间主任 职责: 1.定期参与小组活动 2.监督小组的绩效 3.负责小组活动的组织、培训
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1.16 TPM Promotion - Daily Management System



1- Introduction of DMS system



2- Performance monitoring

DMS performance board								
Indicator	Target	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Safety issues unsolved within deadline	0	0	0	0	0	0	0	0
NG products	0 ton	0	18	0	0	0	0	0
Rework	0 ton	1.5	0	0	0	0	0	0
Sales plan achievement rate	100%	100	100	100	80	100	100	100
Number of product changes per day	< 7 times	11	12	0	15	5	0	0
Material inventory	< 3000 tons	3150	3250	3200	3100	0	0	0
Materials about to expire	0 ton	12	12	12	0	0	0	0
Number of trucks not unloaded within 24 hours	0	0	0	0	12	0	0	0

3. Action plan

No.	Problem description	Improvement measures	Person in Charge	Deadline
1	Pellet is too hard	Restoration of pelletizing standard	Wang Le	2023-4-20
2		Adjustment of compression ratio of ring die	Wang Le	4/22/2023
3		Decrease of pelletizing temperature	Wang Le	4/30/2023

6. Monthly review



5. Plant daily review



4. Shift daily review



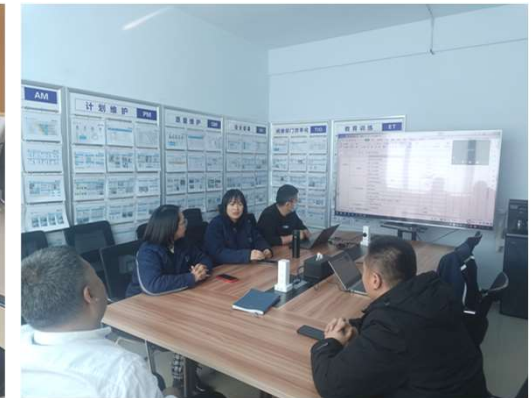
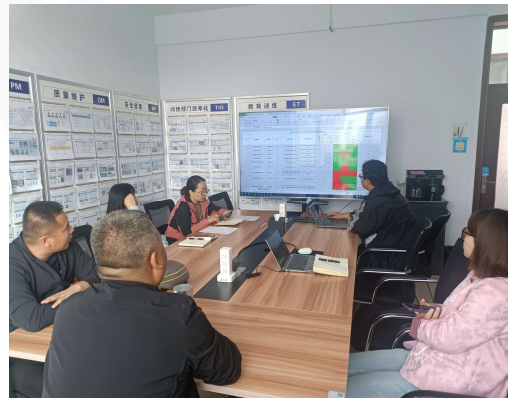
1.17 TPM Promotion-Audit & Counseling



Counseling



Counseling



1.18 TPM Promotion-Atmosphere Building



Quarterly recognition



Half-year recognition



Annual recognition



1.19 TPM Promotion-Benchmarking

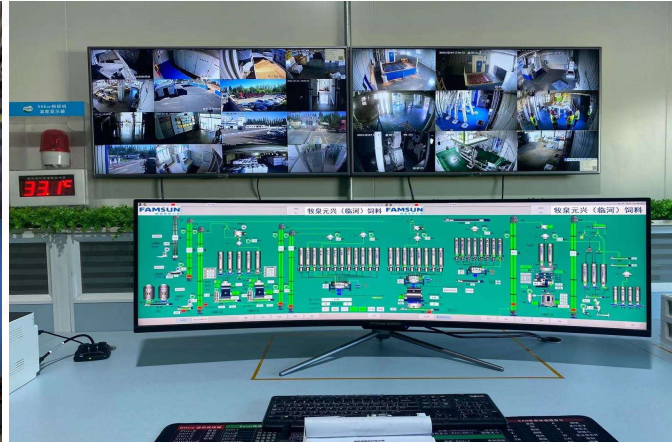


12 benchmarking/discussion meetings, 8 visits to other companies, and 47 cases of horizontal deployment in 2023



Learn and visit for continuous improvement

1.20 A better plant





优然牧业
YOURAN DAIRY

— T H A N K Y O U —



2023 TPM Award - Achievement Sheet

Company	Youran Linhe Husbandry Co., Ltd.
Plant name	Bayannur Muquan Yuanxing Feed Co., Ltd.
TPM Slogan/Objectives	TPM makes a better future
Year when TPM activity started	February, 2019
Year of benchmarking	2019

Category	Index (Calculation Formula)	Unit	Kick off/TPM Started (or last time awarded)	Actual Status 2022
S	Number of work-related accidents requiring days off work	case/year	0	0
S	Number of work-related accidents not requiring days off	case/year	0	0
P	Productivity for main products	ton/hour	15	20
P	OEE (or Overall Plant Efficiency)	%	85.6	90.2
P	Availability	%	88.96	92
P	Performance rate	%	97.2	98.1
P	Quality products rate	%	98.95	99.9
P	Number of breakdowns	Breakdowns/year	38	1
P	MTBF	Hour	180	5112
P	MTTR	Hour	1.57	1.33
Q	Number of customer complaints	Number/year	0	0
Q	In-line defect rate, scrap	%	0	0
Q	In-line defect rate, scrap and rework	%	250	51
C	Cost index	Cost/Unit Cost/Kilogram	100	100
D	Production lead time	Day	13.5	6
D	Delivery performance	%	95.72	100
S	Safety index	Accidents per 1,000,000 operator hours	0	0
M	Number of employee suggestions	Number/year	633	1080