養猪學習院
PRACTICAL TECHNICAL TRAINING

PSY应用研究院
INSTITUTE OF PSY APPLICATION

加农正和
CANZOHO

—To build a learning organization, pig enterprises to explore digital learning—

Tan Hui

Chief Knowledge Officer of PTT Pig Learning Institute

Tel & Wechat： 13637332725

CONTENTS

1. Research background: Current situation and challenge of pig industry

1. Management level: Pig industry is experiencing the predicament of low profit, micro-profit or even negative profit, and cost reduction has become one focus of major enterprises.

2. Production level: Pig farms are facing complex problems, but their ablity to set and implement production standards and the capacity to identify and solve problems on site are weak, and there is a difficulty in improving production performance.

3. Talent challenge: There is a large flow of talents in pig enterprises. The enterprises do not have long-term talent training and echelon construction, and the talent replication system cannot keep up with the strategic development.

4. Development challenge: With the disappearing of market dividend and scale effect, people have become the biggest variable in the competition of pig farms, and the talent-driven strategy is the key to form management compound interest.

Improving team ability and organizational efficiency has become a common compulsory subject for pig enterprises

Digital status of learning in pig enterprises

- **Current status of online：** Online training accounted for 37%, and the combination of online and offline accounted for 51%, indicating that 88% of enterprises have realized online learning;
- **Current status of datamation** : 84.7% of enterprises organize learning is listening to lectures, not learning data capture and management.
- **Current status of digitalization：** Enterprises rarely have learning results, let alone analysis of changes in production data after learning, and no data-based management of talents.

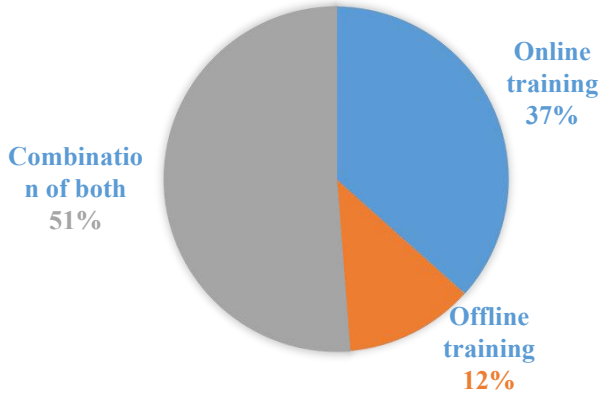


FIG. 1 Online training of 82 enterprises

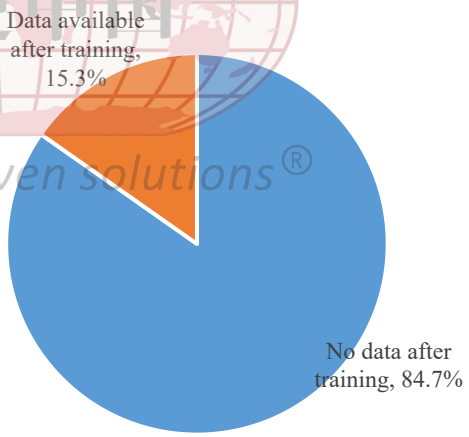


FIG. 2 Data of 59 pig raising enterprises after training

Data resource:
PTT Pig Learning Institute

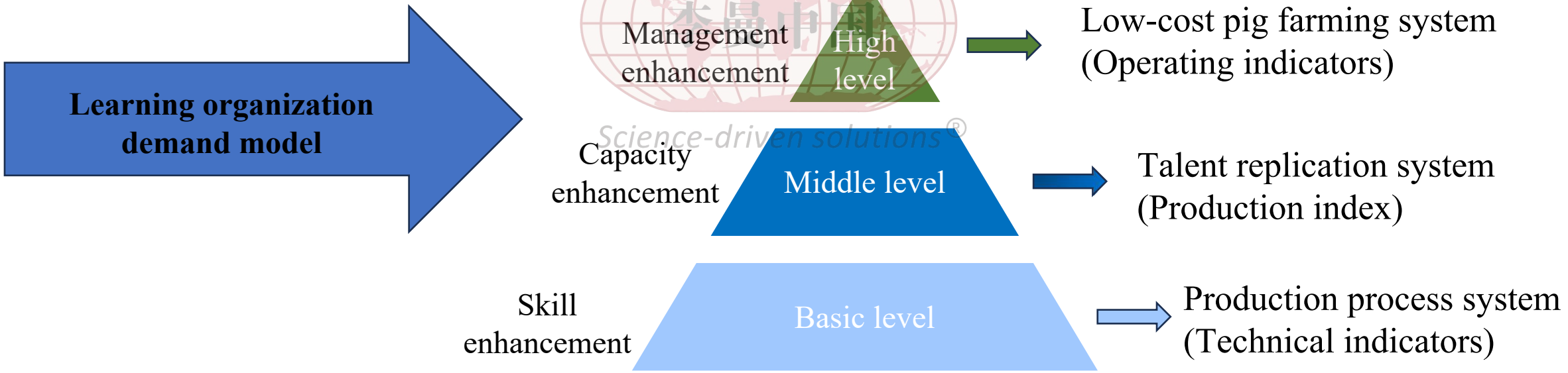
Changes of digital learning in pig enterprises

The definition of digital learning: refers to the interconnection of learning data, production data and talent data. Through the analysis of these three data, business decisions are formed, and finally the quality of enterprise management and core competitiveness are improved.

Development stage	On site	On-line	Datamation	Digitization
Learning design	Live lecture	Online lecture	Online lecture + on-site practice	Tailoring a learning organization based on production needs
Effect evaluation	Satisfaction, attendance	Length of study, test scores	Learning transformation, Production performance	Achievement transformation, operating efficiency

Building a learning organization is the starting point to enhance the competitiveness of the system

- Learning cannot solve everything, but all changes begin with learning
- Enterprise competition, win in the system competitiveness. The core element of competitiveness in all systems is people
- Under the new cycle, enterprises need to build learning organizations to upgrade their competitiveness



2. Design of learning organization in pig enterprises

➢ How should pig enterprises build learning construction and organize digital learning?

1. The impact of digital learning 1.0 (online only, evaluation, transformation) on production performance
2. The impact of digital learning 2.0 (online and offline, customization, indicators) on production performance
3. The impact of Digital Learning 3.0 (Learning organization, continuity, institutional, strategic) on production performance

3. Share excellent cases of digital learning

3.1 Digital Learning 1.0 (online only) case

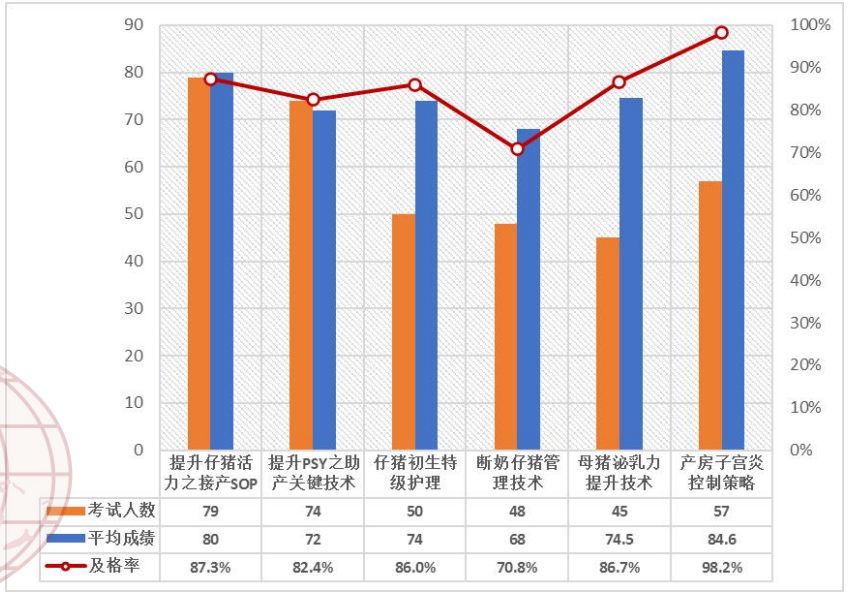
- **Enterprise background:** There are 10,000 sows in stock; Standardized processes exist in pig farms, but are not enforced
- **Study situation: Establishing an online corporate learning academy**

From March 20 to April 25, the entire staff studied 6 lessons online and a total of 90 people participated in the exam, with an average exam score of 75.5 and an average passing rate of 85.3%;

- **Learning outcomes: On May 13, the overall stillbirth rate decreased by 5%, the crush rate decreased by 2%, and the average weaning weight increased from 5.5kg to over 6.5kg.**
- **Keys to Success:**

Course content: in line with the characteristics of adult learning, easy to remember, can be remember and carried out

Transformation design: learning data, coaching, field manager accountability system



Delivery room performance improvement

	Before learning	After learning	Differences
Stillbirth rate	9%	4%	5%
Average weaning weight	5.5kg	6.5kg	1kg

3.2 Digital Learning 2.0 (online combined with offline) case

- **Enterprise background:** There are more than 20,000 sows in stock; The herd and the team are new
- **Online learning design:** Learning, practicing, testing, evaluating, realizing
- **Online study situation:** It established the Corporate Learning Institute, with 9 sessions, 234 participants and an average of 117 examiners per session; the average score was 78.7
- **Online learning outcomes：** The mating increased by 11% and the piglet survival rate in farrowing house increased by 4%

	Before learning	After learning	Differences
Breeding rate	74%	85%	11%
Survival rate of piglets	92%	96%	4%

3.2 Digital Learning 2.0 (online combined with offline) case

Online and offline digital learning design is more guiding for production

- **Offline study situation:** 2 on-site coach and consultor, production index improvement, project system
- **Study situation:** On-site research, customized SOP process, customized training course, project proposal, project summary meeting, management tools
- **Learning outcomes:** The estrus rate increased by 7%, the standing rate increased by 15% , the conception rate at 35 days increased by 18% and the weaning weight increased by 1.2kg after the instruction in the maternity ward.
- **Achievement application:** Summarized and formed 8 pregnancy matching processes and 7 delivery room processes, which were applied in the whole company.

Improved performance at the mating stage

	Number	Estrus rate	Standing rate	Conception rate at 35 days
Before learning	1120	85%	80%	72%
After learning	1080	92%	95%	90%

Improved performance at the delivery room stage

	Before learning	**After learning**	**Differences**
Weaning weight at 23 days	5.6kg	6.8kg	1.2kg

3.3 Digital Learning 3.0 (online combined with offline-System construction) case

- **Enterprise background：** Listed pig enterprise, performance improvement, strong learning force
- **Organizational design for learning：Headquarters coordination, regional linkage; external empowerment, internal implementation; short-term indicator improvement, regular joint summaries**
- **Time of project**: 2 years
- **Content of implementation：** In the first year, **on-site coaching and consulting in pig farms, online pig raising training camp** at grassroots level; The second year, **middle and senior leaders training camp, on-site coaching and consulting, high-level exchanges and learning**.

Design of learning organization system			
Level	Basic level	Middle level	High level
Pig farm scene	Breeder, technician	Supervisor, farm manager	Technical/production director, general manager
Personnel needs	Knowledge skills (curriculum, knowledge)	Management skills (execution, leadership)	Business strategy (platform, model)
Training form	Knowledge to be processized, technology to be toolized	Experience inspiration, case study, customized coaching	Industry insight, resource integration, excellence benchmarking
Solution	On-line pig raising training camp	on-site coaching and consulting, enterprise leaders training camp	Industry technical achievement meeting, enterprise mutual visit
Achievement of goals	Skill improvement of professional talents	Management refinement of key positions	Improvement of enterprise management ability

3.3 Digital Learning 3.0 (online combined with offline-System construction) case

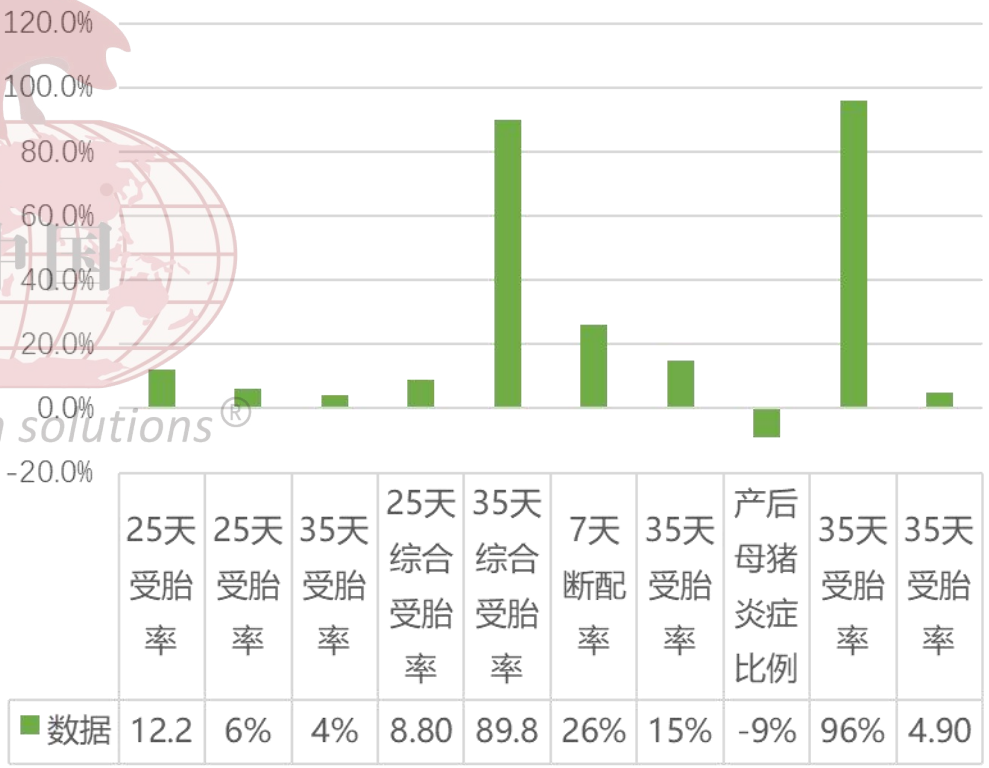
Output content:

1 digital management platform, 12 online training, more than 500 people online learning, 17 on-site coaching and consulting, 2 enterprise leaders training camps

Implementation Results:

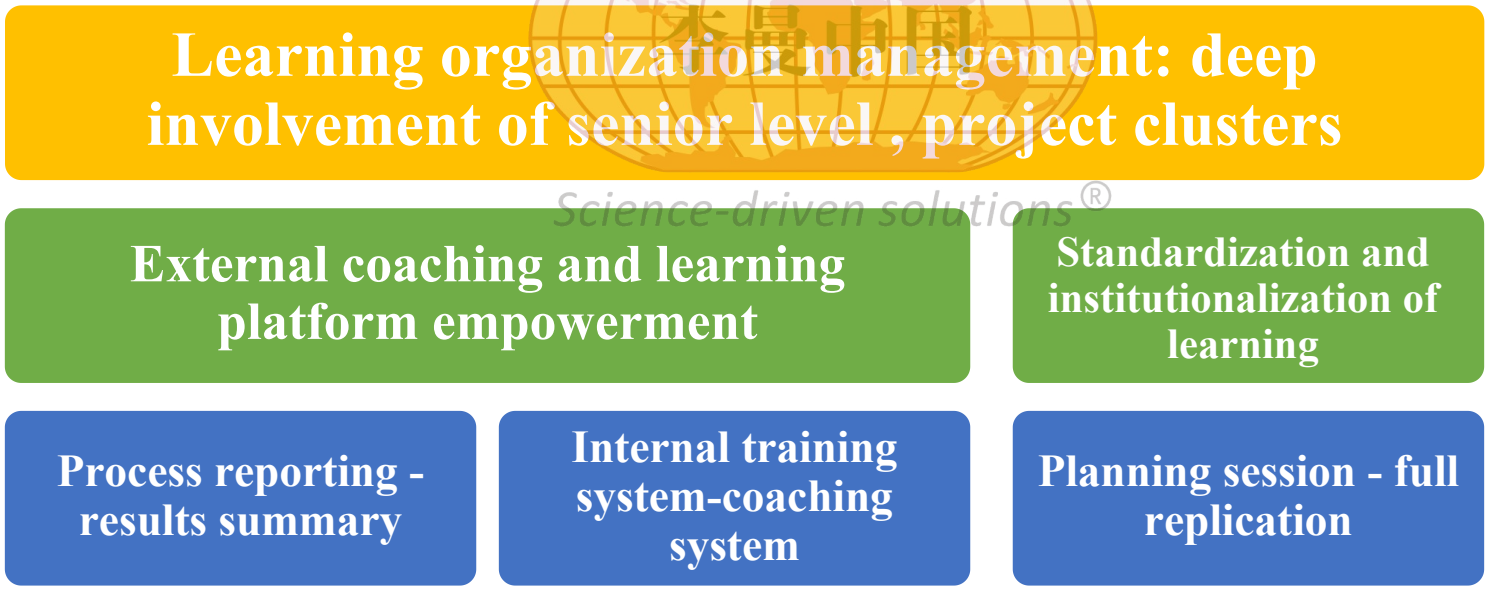
Project indicators	Before coaching	After coaching	Differences
Total litter size	7584	8321	*
Average fresh stillborn per farrow	2.1	0.7	-1.4
Proportion of labor exceeding 4.5 hours	51%	7%	-44%
Proportion of uterine inflammation	11.4%	5.1%	-6.3%
Survival rate of piglet	**95.3%**	**96.1%**	**0.8%**
Average weight of weaned piglets /kg	6.4	7.1	0.7

Remarks: Implementation of integrated operation to improve the survival rate of piglets in the delivery room



3.4 Digital Learning 3.0 (online combined with offline- Fine management) case

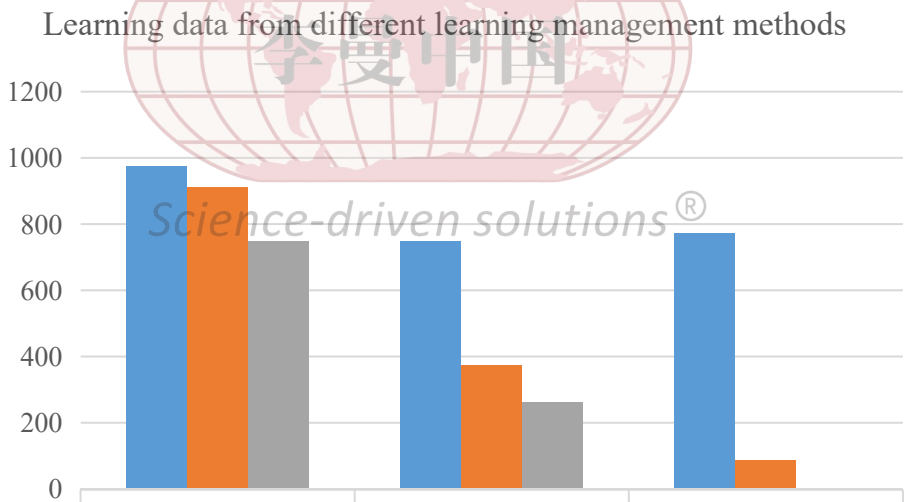
- **Enterprise background**: Listed pig enterprise, stable production, cost reduction, strong executive force
- **Time of project**: 3 years;
- **Coverage**: 5 branches, 15 pig farms, 21 on-site coaching sessions for lean production projects, 15 project topics, 2,099 employees learning online.



3.4 Digital Learning 3.0 (online combined with offline- Fine management) case

Learning organizations need to be managed

The organization expects to find good talents through independent learning. The results proved that the difference between the number of participants in unified organizational learning and employee independent learning was very large, with the percentage of listening to lectures decreasing from 95.8% (910/950) to 11% (85/771) and the percentage of exams decreasing from 76.7 (747/975) to 0.



	Unified organization	Notice only	Autonomous learning
No. Registrants	975	748	771
No. Attendees	910	373	85
No. Examiners	747	261	0

3.4 Digital Learning 3.0 (online combined with offline- Fine management) case

Output content

1. Standardized construction: key points for lean management of delivery rooms, key points for lean management of mating and pregnancy stage
2. Staff efficiency management: job responsibilities and linkage, personnel allocation and plan of labor division

时间	需上班人数	小计人数	事项	内容	责任人	人员需配置数量
1.断奶前			断奶筛查	断奶前配种组长和断奶单元饲养员进行交接，将异常母猪标记和一胎母猪标记	配种组长1人+产房组长1人+本栋饲养员1人	3
2.断奶当天	配种舍上班人数6人	6	断奶筛查	断奶时将异常母猪和一胎猪集中管理	配种舍组长1人+饲养员5人，包含赶断奶猪	6
3.断奶第二天第三天	配种舍上班人数6人	6	诱情	挂档案卡	3名饲养员	3
				赶公猪	1名饲养员	1
				断奶第二天将公猪放在母猪前面5头猪为一组接触不低于30秒，兼顾鉴定脚痛，流脓治疗，提前发情，外伤等异常猪，最后换一头公猪再进巡视一圈，350头待配猪，用时1小时左右	配怀组长1人+辅配1人查情	2
4.断奶第四天第五天	配种舍上班人数6人	8人	刺情	赶公猪	1名饲养员	2
	产房联动人数2人（上午10点左右和下午4点半左右到配种舍联动）			每人3头猪，站在三头猪中间，五步刺情法：阴户-后跨-腹部-乳房-背部（每头猪30秒），（1.6-2小时一次）	配怀组长1人+技术员按压2人	3
					配怀辅配1人+技术员按压2人	3
5.输精操作	配种舍上班人数6人	12人	清洁母猪外阴	用水清洗猪屁股	饲养员2人	2
				插管人员再直接用纸巾清洁外阴部分后直接插外管	组长或者辅配1人	1
			常规输精	后备母猪输精，赶公猪静立输精配合背夹刺激常规输精保证精液80ml	饲养员赶公猪1人	1
					输精人员3-4人	4
	产房联动人数6（上午10点左右和下午4点半左右到配种联动）		深部输精	1.用水清洗猪屁股	饲养员2人	2
				2.副配清洁母猪外阴插外管	组长或者辅配1人	1
				3.间隔经产30-一胎60秒由组长插好内管	组长或者辅配1人	1
				4.挤精液，30秒-60秒/头，挤完精液后先拔内管，再把外管折好绑定，记录输精状态在档案卡	饲养员5人	5
				5.专人负责拔管并评判倒流、污染、炎症等情况和倒流10ml进行补输精液，异常及时治疗，档案卡记录，轻微炎症治疗方案（按照产房三天炎症治疗方案）	组长或者辅配1人+饲养员1人	2

3.4 Digital Learning 3.0 (online combined with offline- Fine management) case

Implementation Results: From individual indicator improvement to enterprise system efficiency improvement

In 2020, the 25-day mismatch rate on one of the farms was reduced from 14.3% to 2.8%, and the mismatch rate was reduced by 11.5% and was kept within the target 4%

In 2023, after on-site coaching in a pig farm's farrowing house: the percentage of fresh stillbirths was reduced by 50%, the percentage of uterine infections was reduced by 50%, piglet weaning weights were increased by 0.65 kg, and the 7-day weaning rate of sows was increased to 93.64%

Project	Control group	experimental group	Difference from control group
Number of experimental sows	80	80	0
Number of dead sows in farrowing house	13	5	-8
Nmumber of sows kept for milking	2	2	0
Number of weaned sows	65	73	-8
Number of weaned breeding sows	56	71	15
Weaned re-mating rate	86.2%	97.3%	11.1%
Total re-mating rate	70%	88.8%	18.8%
Number of sows pregnant in 25 days	48	69	21

Project	Before	After	Difference
Stillbirth (head)	20	10	↓50%
Average litter size (head)	11.13	11.95	**↑0.82**
Number of sows with mastitis (head)	5	1.5	↓70%
Proportion of sows with uteritis (%)	20	10	↓50%
No feeding on the first day after farrowing (head)	4.5	1.5	↓67%
Feed intake on the 7th day after farrowing (kg)	6.5	7	**↑7%**
Average weight of piglets at 7 days in weak care house (kg)	2.5	4	**↑1.5斤**
Number of dead sows in 7 days after farrowing (head)	37	6	**↓84%**
Weaning weight of piglets (kg)	13	14.3	**↑1.3斤**
Sow peak feed intake (kg)	7.5	8	**↑0.5公斤**

3. Learning organization is the cornerstone of sustainable business

Learning creates change and Learning organization determines the future

1. Digital learning should have 3 major data, their analysis and results, which can provide business decisions to enterprises.
2. Online combined with offline training results in the best, helping to achieve processized technics, toolized concepts and simplified implementation.
3. On-site coaching is expected to quickly improve the production by effective technical programs, making a breakthrough in whole system by the improvement of one indicator.
4. Learning process needs the design of small victories reachable, leading the team to experience the joy of success, in order to adhere to the big victory.
5. Enterprise learning organization to be tailored, taking into account the corporate culture, organizational structure, operational requirements.
6. During the operation of the learning organization, it is necessary to organize regular meetings, supervise the process and evaluate the results, carrying out the PDCA cycle.
7. Enterprises should accumulate and construct their own pig raising knowledge system, pig raising technology system and pig raising coaching system.

Discussion: Five key points of digital learning landing in the enterprise

Preparatory stage → **Execution phase** → **Evaluation phase** → **Transformation stage**

1 Design systematization

Design 1 learning organization system

Construct system: goal,organization, mechanism, reward……

Team building: leader's will, multi-level decomposition of responsibility to individuals, design of role responsibilities and labor division

External team empowerment

2 Scientific training
3 Process standardization

Implement the program topics of 1 indicator per session

Carry out effective on-the-ground training for 3 groups of people

Organize 1 set of SOP process

Cultivate 1 group of high performance field managers

Promote 1 production index improvement

Manage through project system, combine of training and combat

Offline co-creation, online standardization, on-site landing, stage victory

4 Evaluation datatization

1 batch of benchmarking cases

1 set of digital evaluation system

1 digital intelligence platform

4 major meetings (wrap-up meeting, results meeting, commendation meeting, planning meeting)）

5 Value maximization

Promote 1 batch of business in problem solving

Create 1 enterprise resource platform

1 team of internal trainers

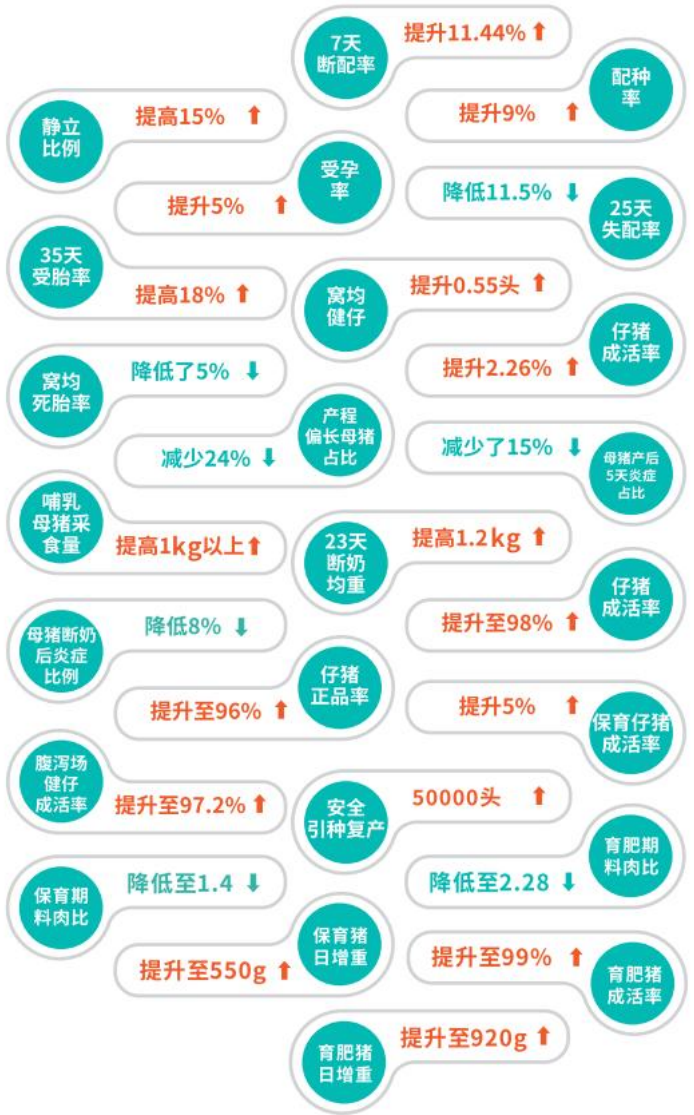
1 set of training course resources

1 learning knowledge map

Learning organization, let more pig enterprises succeed

Relying on digital learning technology and digital learning platform
Focus on enterprise strategic objectives, key indicator system, talent skills status
Build a digital learning organization with high efficiency, standards, landing and good experience
Help enterprises to achieve the goal of low-cost pig breeding and cross-cycle development

“1+3”精益生产项目咨询			
1个平台	PTT养猪学习院(APP)		
3大解决方案	实效落地培训方案	现场辅导咨询方案	企业学院共建方案
18大交付内容	护娩师培训班 线上养猪训练营 企业将帅训练营 中关村CTO实操班 中关村CEO研学班	现场调研诊断 项目建议书 定制SOP流程 定制内训课程 项目管理工具 项目总结方案 企业辅导随访	定制企业学习院 培训体系搭建 教练体系搭建 猪场管理软件 行业游学项目 研学基地共创



Acknowledgement

Thanks to the support of National pig industry Technology Innovation Strategic Alliance, Hunan Agricultural University College of Veterinary Medicine, and the following pig enterprises!

養猪學習院
PRACTICAL TECHNICAL TRAINING

China Practical Pig Consulting Institution

Science-driven solutions®

THANKS FOR YOUR ATTENTION