



# 猪场生物安全的减法

## Subtraction of biosecurity in pig farms

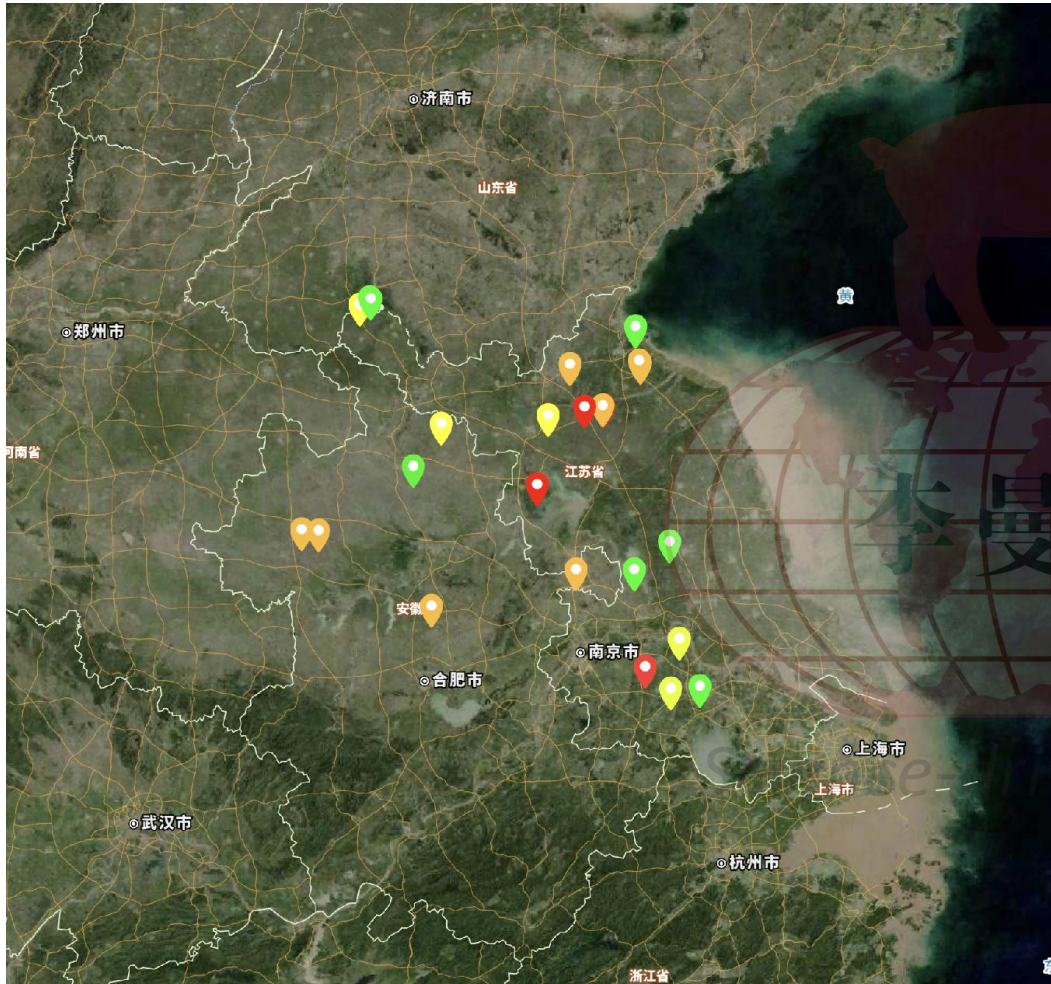
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江苏立华食品集团股份有限公司：黄建强（养猪产业兽医）



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- 江苏安徽；平原；人口密集区；
- Jiangsu; Anhui; plain; densely populated areas;
- 平养楼房，一点两点三点式；
- Flat maintenance building, one-site, two and three sites;
- 26个在养母猪场；约10万基母
- 26 sow farms; about 100,000 sows
- 500-10000的单场规模
- 500-10,000 single farm size
- 8个蓝耳双阴母猪场；
- 8 PRRS double negative sow farms;
- 商品猪以自育肥为主，少量放养。
- Commercial pigs are mainly raised by themselves, with a small number of free-range pigs.
- 4000-40000的单体规模
- The size of a single body of 4000-40000
- 数据更新为25年9月。
- The data was updated in September 2005.

## 目录

—  
问题Question

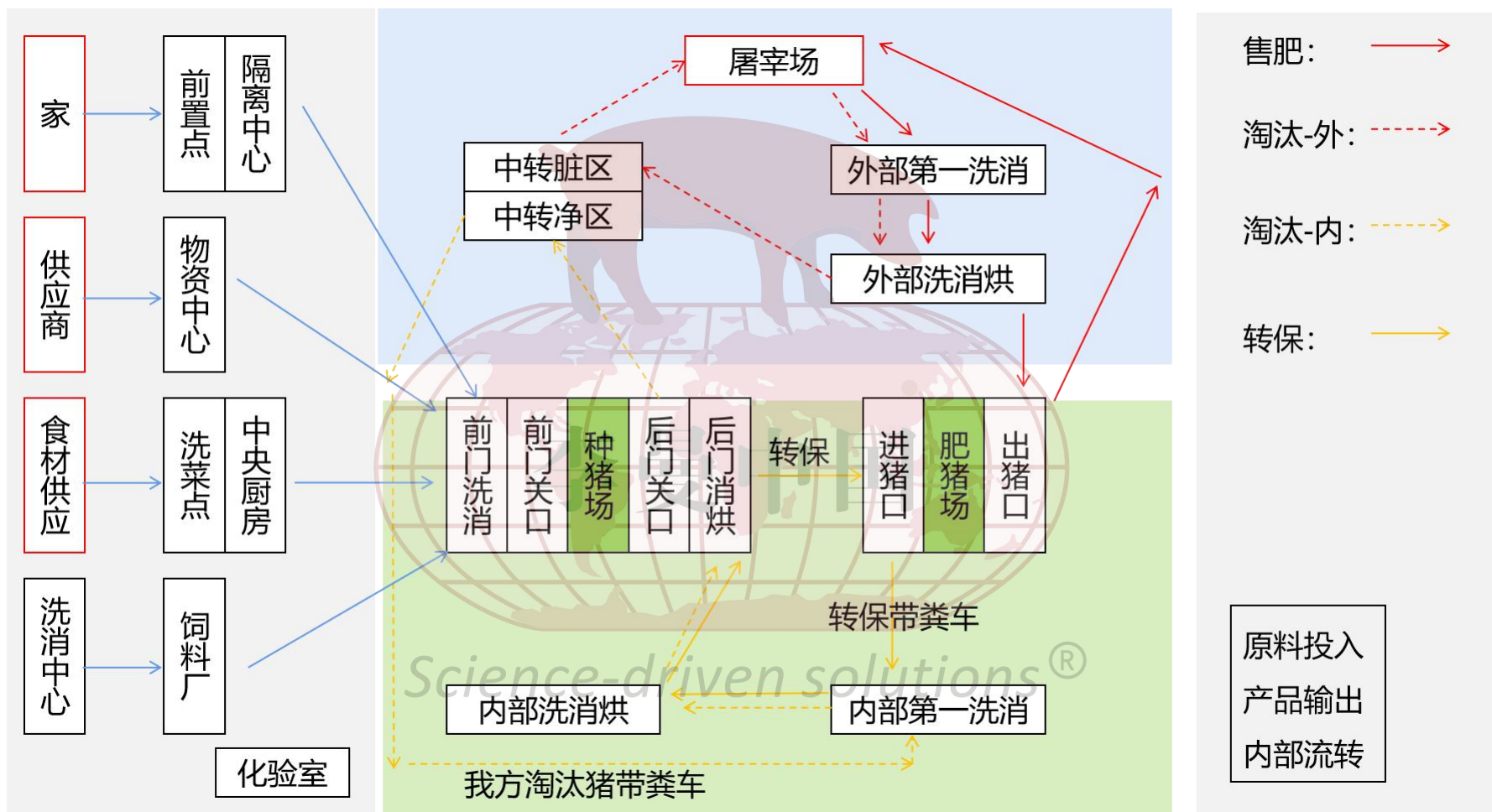
二  
场外off-site

三  
场内On-site

四  
总结Sum up

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原生物安全体系总图Original biosafety system general diagram

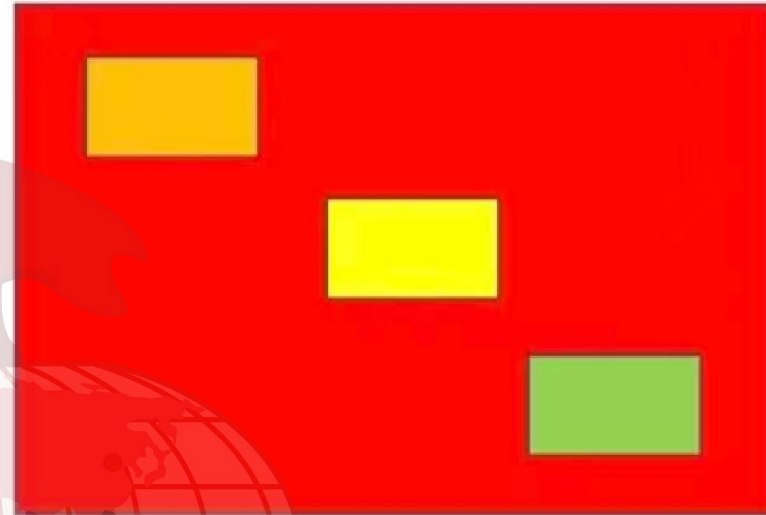




先天选址的难处：逐级减毒，是否还有必要？如何面对二次污染的压力？  
The difficulty of congenital site selection: is it necessary to reduce the virus step by step? How to deal with the pressure of secondary pollution?



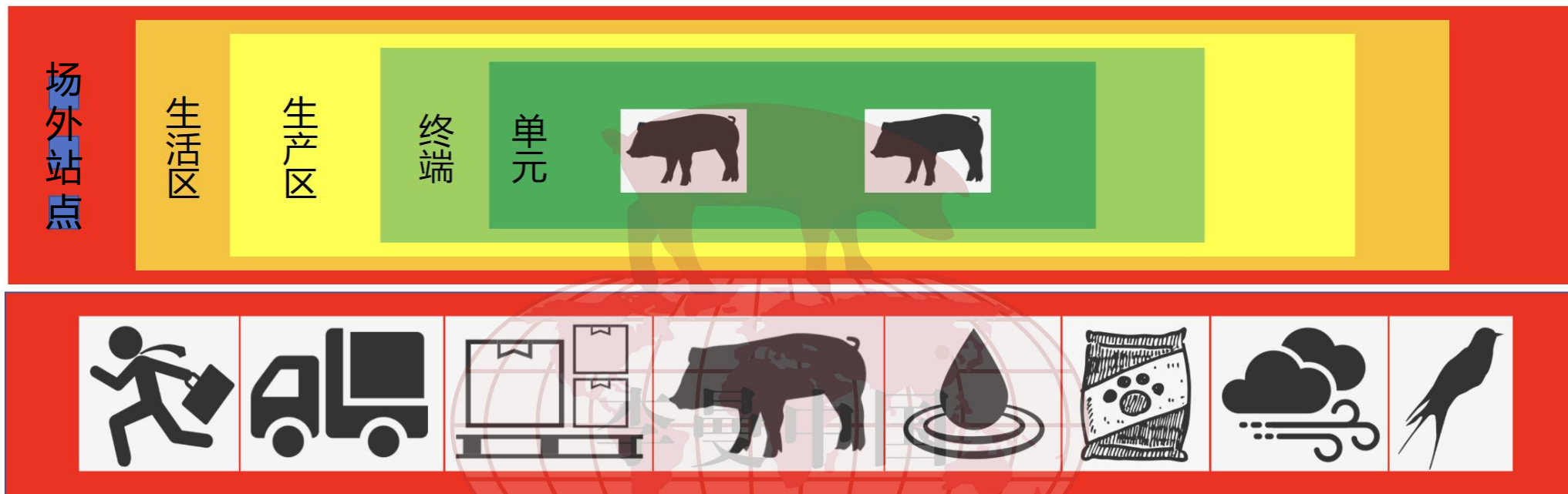
我们以为的“逐级减毒”



实际上平原及人口密集区的“逐级减毒”



每次转运/接驳都是在危险中穿行，都有被二次污染的可能，



- 离猪太远；顾及太多；成本较高
- Too far from the pig; too much to consider; high cost
- 结果不好：每次复盘加一次码，结果还是不好
- The result was not good: every time I reviewed and added a code, the result was still not good
- 10月-来年3月：短期内，同时发病。不同区域，不同洗消体系，不同人员团队。
- October to next year March: In the short term, simultaneous outbreaks occur in different regions, with different decontamination systems and different teams.
- 调整：去伪存真，聚焦重点，关键点上发力
- Adjustment: to eliminate the false and focus on the key points



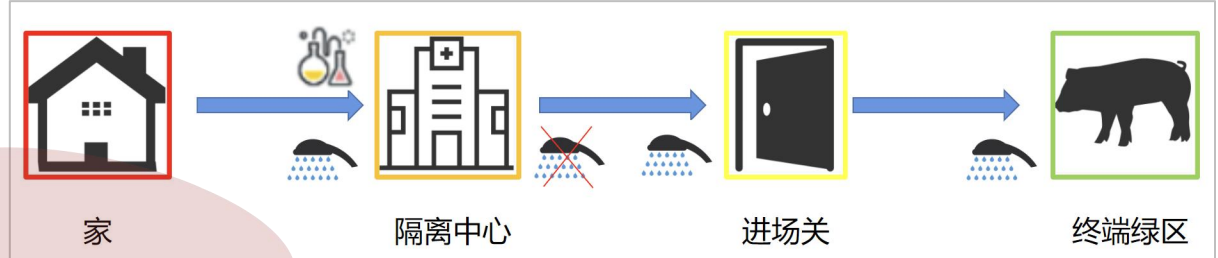


## 1 人员返场1. Personnel return to the field

常规猪场		前置点	隔离中心	进场	进终端见猪
常规人员	事件	采样等结果	洗澡进入	洗澡进场	正常上班
	时间	第 1 天 (当天)	第 1 天	第 1 天	第 2 天
巡检人员	事件	-	-	直接到场门口, 留样不等结果, 洗澡进场	按要求洗澡, 当天可见猪
	时间	-	-	第 1 天	第 1 天
普通蓝耳阴性场		前置点	隔离中心	进场	进终端见猪
常规人员	事件	采样等结果	洗澡进入	洗澡进场	正常上班
	时间	第 1 天 (当天)	第 1 天	第 1 天	第 2 天
巡检人员	事件	无需	无需	留样不等结果, 直接洗澡进	次日可见猪
	时间	-	-	第 1 天	第 2 天
高级别蓝耳阴性场		前置点	隔离中心	进场	进终端见猪
所有人员	事件	采样等结果	洗澡进入	洗澡进场, 在场内隔离宿舍过 1 夜+生活区宿舍 1 夜	正常上班
	时间	第 1 天	第 1 天	第 1+2 天	第 3 天

备注

- 1) 差异解释: 巡检人员, 原则性不碰猪; 常规人员, 需要碰猪; 蓝耳病毒需要 24 小时衰减
- 2) 高级别蓝耳阴性场: 指“供种”或“供精”的猪场, 如: 云台、礼嘉、首菱、联盟、上兴、欢口核心; 其他为普通蓝耳阴性场。
- 3) 手机: 私人手机不允许上线—线上配工作手机
- 4) 巡检人员不去隔离中心但是门口留样事后检测阳性:
  - a. 首次警告, 全集团通报
  - b. 二次罚款 200+未来 1 个月取消快速进场资格。
- 5) 部分公司特殊情况, 经报备和同意后, 可以零星调整。如, 隔离中心离猪场太远, 常规人员, 也可以不去隔离中心, 直接到场门口采样等结果。



现行主流方案: Current mainstream solutions:

- 人分类; 场分级 Classification of persons; field classification
- 1次采样2次洗澡, 当天可进生活区 One sampling, two showers, and you can go into the living area on the same day
- 巡检人员: 直接到场门口, 不需要等检测结果, 当日可进猪舍。Inspector: Go directly to the door, do not need to wait for the test result, enter the pig barn on the same day.
- 轻装简行; 检查指甲; 澡后金属探测器检查 Light and simple; check nails; metal detector after shower

部分分公司试点: Pilot in some branches:

- 采样不等结果, 直接洗澡进入下一步流程 Sampling results are not equal, take a shower and move on to the next step
- 较偏远猪场, 直接到场门口, 不再去隔离中心 Compared with remote pig farms, they go directly to the gate instead of going to the isolation center

## 2 物资进场2. Material access

- 原：最小包装，浸泡/烘干/静置14天进场
- Original: Minimum packaging, soaked/dried/stored for 14 days before entering the site
- 原始完整包装物资Original complete packaging materials
  - 进场外大库&进场，仅做表面消毒； Outside the warehouse and inside the warehouse, only surface disinfection is done;
  - 进终端拆到最小包装浸泡Take the terminal apart and soak it in the smallest package
- 普通散装杂品（地采） Common bulk miscellaneous (field collection)
  - 维持：泡、烘、静置（+喷） Maintenance: soak, dry, let stand (+ spray)
  - 部分试点：阳光静置棚 Partial pilot: Sunlight storage shed
- 疫苗：进场冰消毒水10分钟；进终端常温消毒水
- Vaccine: Enter the ice disinfectant for 10 minutes; enter the terminal normal temperature disinfectant
- 浸泡或烘干处理：不需要静置（减少资金占用）
- Soak or dry treatment: no need to sit still (reduce capital occupancy)
- 个人快递：内勤统一买（审核）、安全、易消毒
- Personal express: internal staff buy (review), safe, easy to disinfect
- 设备改进：易执行
- Equipment improvements: easy to implement







6月，高温可达67度，50度以上能维持7小时。但受天气影响





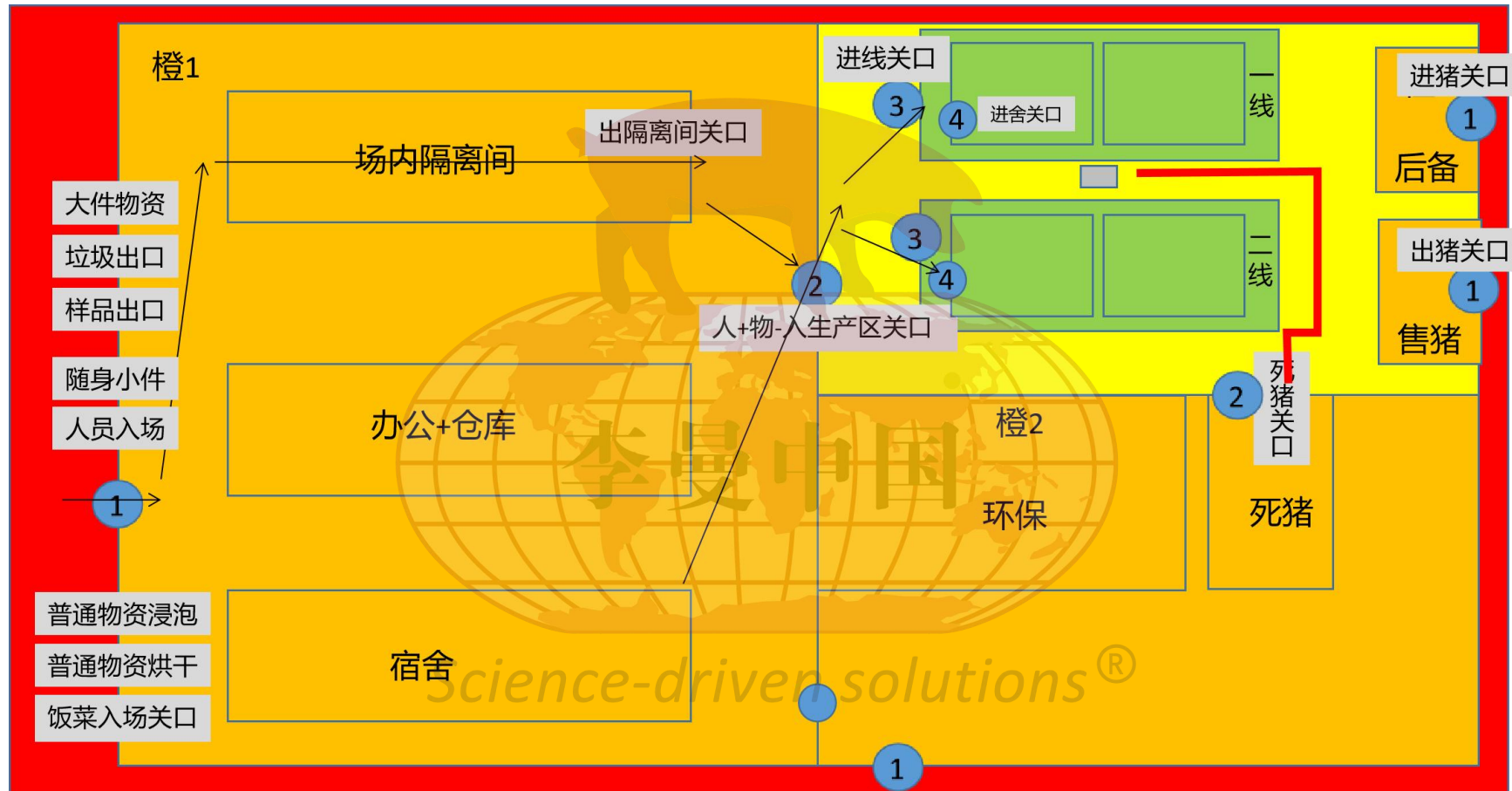
- 主要纠结点：烘不烘 Main dilemma: Will it bake
- 成品料车：Finished material car:
  - 装料前的烘干：顺季1周1烘，逆季1天1烘 Drying before loading: 1 drying per week in the same season, 1 drying per day in the opposite season
  - 场边：原则上不烘；小试，料臂热烘。 Outside the field: in principle, no baking; small test, material arm hot baking.
- 原料车：无特殊处理，整车雾化 Raw material car: no special treatment, the whole vehicle is atomized
- 送宰车：检查→外部洗消中心（烘）→场边消毒/或烘干→装猪→屠宰场 Deliver the vehicle: Check → external washing and disinfection center (dry) → field side disinfection/or dry → load pigs → slaughterhouse
- 引种&转保车：备用→内部洗消中心（不烘）→种猪场边（消毒+烘干）→装猪→商品场边消毒→卸猪→返回内部洗消中心备用。 Introduction and transfer of insured vehicles: reserve → internal washing and disinfection center (no drying) → beside the breeding pig farm (disinfection + drying) → loading pigs → disinfection beside the commercial farm → unloading pigs → return to the internal washing and disinfection center for reserve.

- **空滤**：有条件，尽量上。差异极显著。 Air filter: If possible, use it. The difference is extremely significant.
- 食材：the original material of food :
  - 当前：预处理→场外厨房烹饪→熟食送到猪场→烘干进场 Current: Preprocessing → Off-site kitchen cooking → Ready food delivered to the pig farm → Dried and brought in
  - 此处有很大简化空间（场边厨房，隔墙打菜），但是暂未达成一致意见，暂未调整 There is a lot of space for simplification here (kitchen at the edge of the field, dishes on the partition wall), but no agreement has been reached and no adjustment has been made
- 水果：二氧化氯浸泡后直接进场
- Fruit: After chlorine dioxide immersion, it is directly put into the field
- 大件物资：喷雾、覆膜静置
- Large quantities of materials: spray, film and static
- 生物媒介：喜鹊、麻雀；猪舍**密闭**管控终端更重要
- Biological media: magpies, sparrows; pig barn closed control terminal more important
- 手机进场：进场烘干消毒（是否改擦拭，尚未达成共识）
- Mobile phone enters the field: enter the field for drying and disinfection (whether to change wiping, there is no consensus yet)
- 卖肥猪：绝对有风险，但绝对没想象中那么大
- Selling fat pigs: Absolutely risky, but definitely not as big a risk as you think
- 水：雨季防被淹；饮水反渗透（部分深紫外）
- Water: Rainy season protection against flooding; drinking water reverse osmosis (partially deep UV)
- 料：高温制粒-密闭接料-密闭转运-及时关闭料塔
- Materials: high temperature granulation-closed receiving-closed transportation-timely closure of the material tower
- 气：**异常天气**；粉尘
- Air: abnormal weather; dust









日常上班洗一次澡：生活区进生产区关口取消 ②；聚焦进线（终端）③。  
Take a bath once a day at work: the entrance to the production area is cancelled (2); focus on the entry line (terminal) (3).



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- 入职第一课- 进出单元：一脱二跨三洗手，穿衣换鞋踩盆走。
- First lesson on entering the job-entry unit: take off, cross two, wash hands three, put on clothes and change shoes to walk to the basin.
  - 垫板；洗手；防尘服Pad；hand washing；dust cover

- 手机：线上工作手机；个人手机不上线
- Mobile: Mobile for online work; personal mobile offline
- 吃饭：出生产线；原则上不在线上吃饭
- Eating: Out of the production line; in principle, do not eat online
- 死猪处理：原，必须场内无害化，不允许去社会无害化点；改，允许隔墙传送
- Treatment of dead pigs: The original must be harmless in the field, and it is not allowed to go to the social harmless point; the reform allows the transmission through the wall
- 餐厨垃圾：出场/环保区掩埋/环保区养鸡
- Kitchen waste: off-site/landfill in eco-zone/raise chickens in eco-zone
- 环境和道路消毒：日常无必要；异常天气或重点时节有必要。
- Environmental and road disinfection: not necessary on a daily basis; necessary in abnormal weather or key seasons.
- 商品猪免疫：减少频次；63d, 100d, 猪瘟伪狂犬蹄疫，三合一，各1次；顺季部分仅1次。
- Product pig immunization: reduce frequency; 63d, 100d, swine fever pseudocowage, three-in-one, each 1 time; seasonal part only 1 time.
- 带猪消毒：仅商品猪特殊场景
- Disinfection of pigs: only for special scenarios of commercial pigs
- 送样：滴滴；快递；一体机。
- Sample delivery: Didi; Courier; all-in-one machine.
- 检测：异常猪监测为主；淘汰监测；普检（猪只/环境），个人认为意义不大，也发挥不出预警的作用；免疫前监测：测不到
- Testing: mainly monitoring of abnormal pigs; culling monitoring; general testing (pigs/environment), which I think is not very meaningful and does not serve as a warning; pre-immunization monitoring: not detectable
- 剔除：双缺疫苗毒-单元（母猪场）；野毒-阳性猪及左右2头（母猪场）；商品猪（分类）
- Exclusion: Vaccinated virus-negative unit (sow farm); wild virus-positive pigs and 2 others (sow farm); commercial pigs (classified)



A large, faint, light-red watermark of the Lihua logo is centered in the background. It features a stylized pig standing on a globe, with the Chinese characters '李曼中国' (Liman China) overlaid on the globe. A vertical dashed line runs through the center of the pig and globe.

# 四 总结 Summary

*Science-driven solutions<sup>®</sup>*

- 生物安全体系，存在较多可提效降本的空间，部分动作，没必要、离猪远。
- In the biosecurity system, there is a lot of room for efficiency and cost reduction. Some actions are unnecessary and far away from pigs.
- 人员很有必要解放出来；物资分类处理；减少不必要的车辆烘干。
- It is necessary to liberate the personnel; classify and process the materials; reduce unnecessary vehicle drying.
- 聚焦终端：进出终端、进出单元。
- Focus on terminals: in and out of terminals, in and out of units.
- 平原地区，空滤改造很有意义。无空滤猪场要关注异常天气。
- In plain areas, air filter transformation is very meaningful. Pig farms without air filter should pay attention to abnormal weather.
- 结果导向：共性；结果好-做的对；结果不好-努力错了方向了。
- Result orientation: common; good result-doing the right thing; bad result-trying to do the wrong thing.
- 综合平衡：防疫成本；损失概率。
- Overall balance: cost of epidemic prevention; probability of loss.



汇报完毕；感谢指导！  
Thank you!

李曼中国

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黄jq  
江苏 泰州



扫一扫上面的二维码图案，加我为朋友。