



中德畜牧业技术创新中心

German-Sino Centre for Technology and Innovation in Animal Breeding

中德畜牧业合作项目

Cooperation Project on Animal Breeding and Husbandry in China

中德畜牧业合作项目年度报告及德国现代化畜牧业概况介绍

Annual Report of Cooperation Project on Animal Breeding and Husbandry in China & Modern Husbandry in Germany



施密特博士
Dr Ferdinand Schmitt
中德畜牧业合作项目负责人
Teamleader



主题 Topics

德国（欧洲）和中国法律框架发展趋势

1. Trends and legal framework in Germany (Europe) and China

项目目标和组织

2. Project Objectives and Organisation

2020年新冠疫情下项目成果展示

3. Achievements in 2020 under COVID-19 conditions

- a) 牛业项目 Cattle component

- b) 猪业项目 Pig component

- c) 沟通及合作伙伴间合作 Networking and partner arrangements

4. 宣传 Dissemination





欧盟： 欧盟范围内与家畜饲养领域相关的法律发展情况

EU: EU-wide developments relevant for the livestock sector



- 根据欧盟法规（2016/2012）在欧盟范围内统一动物育种法
- EU-wide harmonisation of EU animal breeding legislation through Regulation (EU) 2016/2012
- 根据欧盟法规（2016/429）在欧盟范围内修订和统一动物健康法
- Revision and EU-wide harmonisation of EU animal health legislation through Regulation (EU) 2016/429
- 在共同农业政策计划下一执行阶段（2021-2027年），加强农业农村建设和确保优质食品的生产
- CAP planning for the forthcoming 2021-2027 programming period with a view to strengthening agriculture and rural areas and ensuring high quality food production
- 落实“从牧场到餐桌”策略，此策略作为“欧盟绿色协议”的组成部分
- Implementation of the "Farm to Fork" strategy as part of the "European Green Deal"
- 针对家畜开展动物保护法审查工作
- Fitness Check of EU animal welfare legislation for farm animals



欧盟：动物健康法

EU: „Animal Health Law“ (AHL)



- 动物传染病法规（预计申请日期：2021年4月21日）
- Regulation on transmissible animal diseases (Expected date of application: 21 April 2021)
- 已有的大量动物疾病防控法已简化成为统一的法律和可理解的法律框架，法规内容更简洁
- A huge number of existing legal acts for animal disease control are being streamlined into a single law and a comprehensive legislative framework with simpler and clearer rules
- 重点优先考虑：预防和消除疾病（疾病优先次序和分类，疫苗，更多地使用新的技术如电子识别及动物登记，可追溯性，减少抗生素的抗性）
- Key priorities: prevention and eradicating diseases (disease prioritisation and categorization, vaccination, greater use of new technologies such as electronic identification and registration of animals, traceability, reducing AMR)



欧盟：“从牧场到餐桌”策略

EU: „Farm to fork“ strategy



- 2020年5月20日 欧盟委员会交流（不是立法）
- Communication (i. e. no legislation!) of the Commission on May 20,2020
- 欧盟“绿色协议”中有关农业领域的重点内容为气候变化、生物多样性和环境
- Core element of the EU’s “Green deal” with relevant fields in the agricultural sector on climate change, biodiversity and environment
- 得到大家认可的是，农业领域已减少了大量的废气排放（自1990年起，减少20%）
- Acknowledges agriculture as the only major system that reduced greenhouse gas emissions (by 20% since 1990)
- 旨在改变食品的生产，加工和消费，使其可持续发展
- Aims to transform production, processing and consumption of food in order to make them more sustainable





德国：畜牧业政策

Germany: Policy for the livestock sector



- 德国畜牧业战略（2018年） Animal Husbandry Strategy in Germany (2018)
 - 旨在在德国达成广泛的畜牧业共识
 - Aiming to achieve a broader-based consensus for animal husbandry in Germany
提供必需的资源以改善动物福利及减少环境影响，与此同时，确保农业领域经济可持续性发展
 - Providing necessary resources for improving animal welfare and reducing environmental impact while at the same time securing economic sustainability for the agricultural enterprises
 - 措施 Package of measures
 - 进一步优先考虑动物健康情况
 - higher priority to health and robustness of animals
 - 更高水平的职业认证资格
 - higher level of vocational qualification
 - 针对新建和整修畜舍提出更高要求
 - Higher requirements regarding approval of new-constructions and refurbishments of livestock housing
- 通过资源网络跟进和执行策略 – “Borchert “委员会（2020年）
- Follow-up and implementation of the strategy by a competence network – the „ Borchert Commission „(2020)



中国：国务院发布畜牧业生产相关法律（2020年）

China: Release of the State Council on livestock (2020)



2020年9月国务院办公厅关于促进畜牧业高质量发展的意见

Opinion of the State Council on Promoting Quality Development
in Livestock Industry of September 2020



解决由于肉产品需求增加而产生的问题如环境退化，疾病（如非洲猪瘟）爆发后
消费价格上涨，进口量增加的问题

- Addressing the existing problems of the sector coming along with rising demand for meat such as environmental degradation, rising consumer prices after diseases such as ASF and increasing imports
- 发展现代化畜牧业生产，升级疾病防控措施，发展现代化加工和供应体系以及加快“绿色循环发展”
- Development of a modern livestock industry, an upgrade of disease prevention and control, the development of a modern processing and distribution system and the acceleration of the “green circular development”
- 设定国内畜产品自给率目标，猪肉达到95%，牛羊肉85%，奶制品70%，禽肉100%
- Setting self-sufficiency targets of 95 percent for pork, 85 percent for beef and mutton, 70 per-cent for dairy and full-self-sufficiency for poultry



中国：中华人民共和国生物安全法（2020年）

China: New Biosecurity Law (2020)



2020年10月17日全国人民代表大会常务委员会通过《中华人民共和国生物安全法》。
自2020年4月15日起施行

Adopted by the National People's Congress Standing Committee
on 17 October 2020. It will come into effect on 15 April 2021.

为应对新冠疫情的爆发，此法旨在对中国在生物安全方面所作的工作进行补充

- In response to the COVID-19 outbreak the law is aiming complements China's efforts for biosecurity
- 关于农业方面，本法第三章针对动植物进出口制订了进一步的法规，以及在农业领域，特别是在畜牧业，针对潜在疫病爆发和生物风险的早期预警和报告进行了完善
- With regards to agriculture, chapter three of the law provides further regulations on import and export of animals and plants and improvements in early warning and reporting for potential outbreaks and bio-risks in agriculture, especially for livestock.



中德两国在以下方面达成共识

Conclusions for both countries

- 进一步优化畜牧业生产
- Animal husbandry must be further optimized
- 重点在于减少能源消耗，减少环境影响以及提高能源效率
- The focus is to reduce the consumption of resources and the environmental impact and to increase the resource efficiency
- 提高对动物健康的关注度，减少因疾病（流行病）而造成的动物损失
- Increased attention is given to animal health, reduction of animal losses due to (epizootic) diseases
- 减少抗生素的使用
- Reduced use of antibiotics
- 提高农场动物可追溯的重要性及动物源性产品的质量和安全性
- Increased relevance for traceability of farm animals and quality and safety of animal products
- 在畜牧业管理和监控方面加大数字化应用
- More use of digital application in animal husbandry for management and surveillance



项目目标

Project Objectives

- 项目目标：结合中德两国先进的畜牧业生产管理和科学技术，以示范单位为例，在优化畜牧业生产机制的同时，提高畜牧业育种和养殖产业链的产能和资源效益，并将成果在相关专业领域内进行推广。
- Mechanisms for optimizing livestock breeding and husbandry in terms of resource and production efficiency using German and Chinese technologies and know-how are applied in demo farms and relevant information is disseminated to the Chinese livestock sector.





中德畜牧业合作项目示范区及示范场

Demonstration farms and regions

黑龙江项目示范区

(3个牛场)

新疆项目示范区

(8个牛场)

河南省谊发牧业有限
责任公司 (猪场)
Demonstration farm Yifa
Henan (pigs)

Demonstration
region Heilongjiang
(3 cattle farms)

张北元启牧业科技有限公司
(牛场)

山西椿林牧业有限
责任公司 (牛场)

Demonstration
farm Shanxi Chunlin
(cattle)

Demonstration
farm Zhangbei
(cattle)

北京奶牛中心 (牛场)

Demonstration
farm BDCC
(cattle)

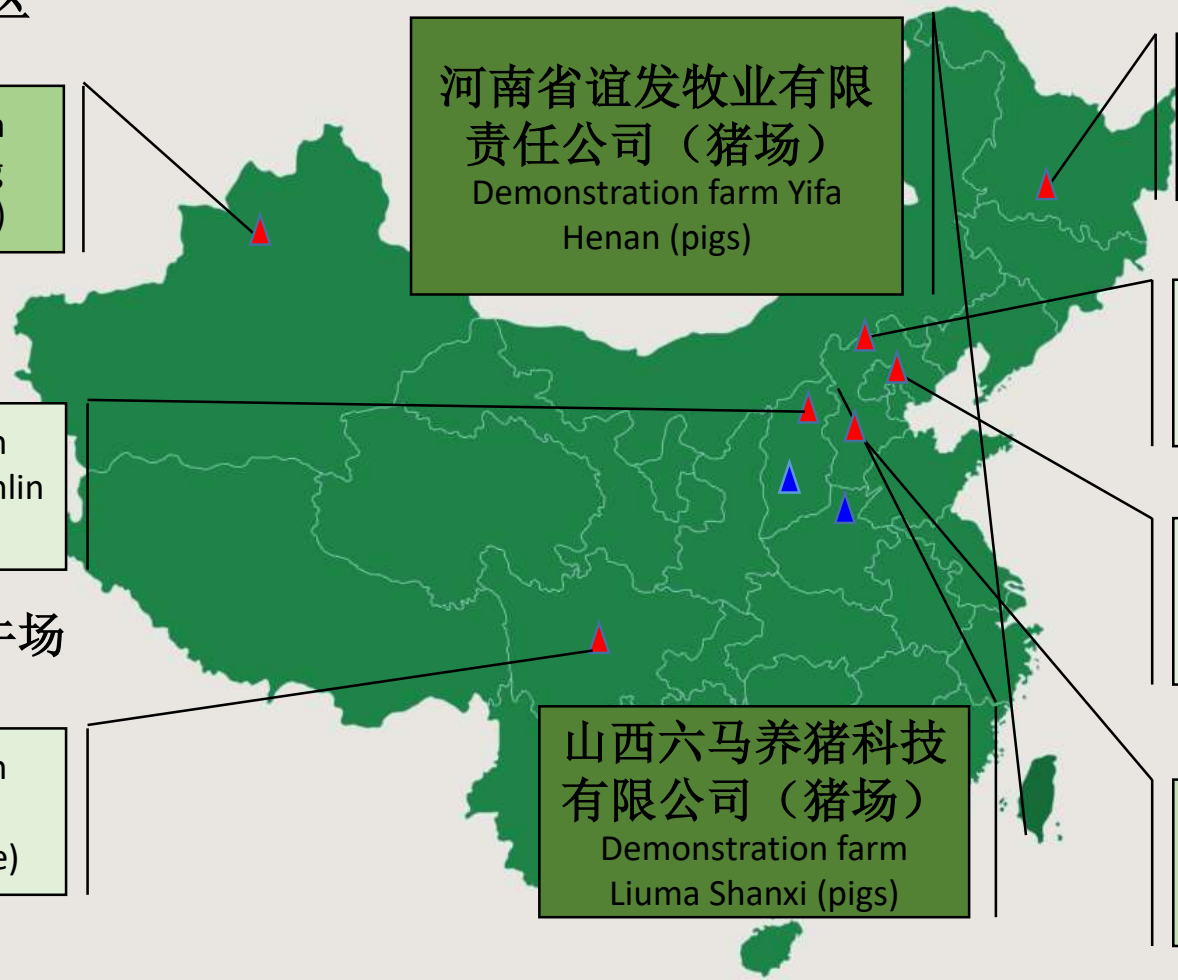
四川省阳平种牛场
(牛场)

Demonstration
farm Sichuan
Yangping (cattle)

山西六马养猪科技
有限公司 (猪场)
Demonstration farm
Liuma Shanxi (pigs)

石家庄合作平台 (牛场)

Cooperation
platform Hebei
(cattle)



2020年中德牛业和猪业项目德方项目参与企业

Business Partners 2020 Cattle and Pigs



新冠疫情的影响

Impact of the COVID-19 pandemic

- 自2020年3月至9月，德国专家来华交流工作无法进行
- Expert exchange was not possible between March 2020 and September 2020; the cooperation and exchange with Chinese partners took place thru the project office in Beijing, activities were implemented online
- 受中国农业农村部的邀请，两位项目专家施密特博士和戴夫斯先生于2020年9月30日可以再次来华开展工作，并从10月15日起开始在北京和鹤壁执行项目工作
- On 30 September 2020, the two long-term experts, Dr Ferdinand Schmitt and Henrik Delfs, were able to return to China at the invitation of the MARA and started their onsite work in Beijing and Hebi on 15 October 2020
- 其他德方专家今年无法来华开展工作
- No other German experts were able to travel to China
- 中方专家今年也无法赴德开展考察工作并参加培训
- Chinese experts were not able to travel to Germany for study trips and training



方式方法（新款疫情下新的工作方式）

Methodology (alternative measures due to COVID-19)

- 现场指导（线上会议，畜群管理在线应用）
- On-site consultation (online meetings, online applications for herd management)
- 专业研讨会（网络视频研讨会）
- Technical seminars (webinars)
- 专业活动（网络视频会议）
- Professional events (web-based video conferences)
- 专业考察（教学视频）
- Study tour visits (teaching videos)
- 撰写以实践为导向的专业材料和技术手册（视频采访和公众号）
- Practice-oriented materials and manuals (video interviews and podcasts)
- 在中国和德国参加国际集约化畜牧展会（线上会议）
- Participation in international livestock fairs in China and Germany (online conferences)

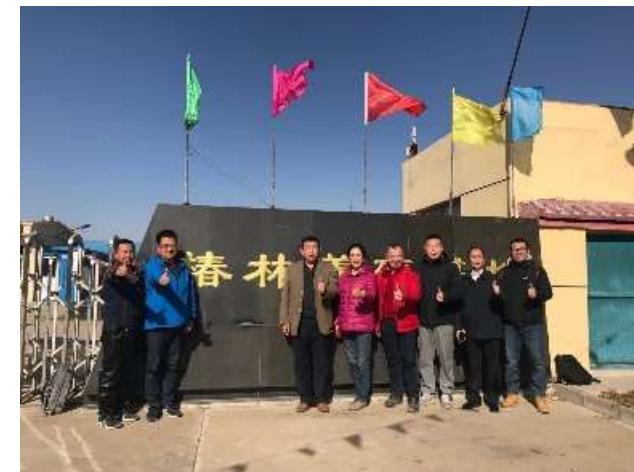


2020年走访中德牛业合作项目示范场以及合作平台（牛场）

Exchange with demo farms (cattle)



- 河北省示范平台：动物标识的益处和组织采样耳标的应用
- Cooperation platform Hebei: Benefits of animal identification and use of tissue sampling ear tags
- 山西椿林牧业有限责任公司：与德系西门塔尔牛杂交，生产管理，牧场数据收集和分析
- DB Datong: crossbreeding with Fleckvieh, production management, on-farm data collection and evaluation



2020年走访中德牛业合作项目示范场以及合作平台（牛场）

Exchange with demo farms (cattle)



- 张北元启牧业科技有限公司：德系西门塔尔牛育种，犊牛、后备牛及公牛饲喂和营养标准，项目数据收集
- DB Zhangbei: Fleckvieh breeding, feeding and nutrition standards for calves, young cattle and bulls, data collection of the project
- 四川省草原科学研究院，成都：环境友好型牧草管理（牦牛放牧），粪污处理
- Sichuan Academy of Grassland Science, Chengdu: environmental friendly pasture management with Yak, slurry disposal
- 四川省阳平种牛场：牧场发展、德系西门塔尔牛育种、畜群管理、新泌乳牛舍建筑图纸设计
- DB Yangping: Farm development, Fleckvieh breeding, herd management, layout-planning for a new dairy farm unit



技术指导手册及教学视频（牛业）

Manuals and training videos (cattle)



- 教学视频：褐牛体型外貌鉴定、修蹄、蹄病治疗护理及繁殖管理（准备拍摄脚本、拍摄、剪辑及中文配音）
- Training videos on Brown Swiss type classification, hoof trimming, hoof care and reproduction management (preparation of screenplay, filming, editing and sound recording in Chinese)
- 技术指导手册：粪污管理、犊牛饲喂及饲料供应和质量（由德方专家撰写、全国畜牧总站和中方专家审校、全国畜牧总站和中德畜牧业合作项目出版）
- Manuals on slurry management, calf rearing and fodder supply and quality (draft by German expert, revision by NAHS and Chinese experts, publication by NAHS and project)



研讨会和技术会议（牛业）

Seminars and technical conferences (cattle)



- 2020年4月30日举办了”德系西门塔尔牛体型外貌鉴定技术体系网络直播研讨会”，线上参会人员共计170人
- Online conference „The system of type classification of Fleckvieh“ on 30th. April 2020 with 170 participants
- 2020年6月30日举办饲料生产和饲料质量技术研讨会
- Technical seminar on fodder production and feed quality, online, 30th. June 2020
- 2020年11月19日在成都开展德国牛只育种体系技术研讨会
- Technical seminar on the German Cattle Breeding System, Chengdu, 19th. November 2020



与河南省谊发牧业有限责任公司开展项目工作（猪业）

Exchange with the demo farm Yifa (pig)



- 2020年10月和11月项目长期驻场专家戴夫斯先生前往谊发开展现场指导工作
- On site visit of the long term expert Henrik Delfs in October and November 2020
- 咨询和复审育种及生产管理
- Consultation and review of the breeding and production management
- 访问谊发示范场猪舍，对已落实的生物安全工作给予指导
- Visit of the demo farm units of Yifa to give guidance on the efforts which have been made on biosecurity
- 访问新建母猪舍（母猪1500头），新建母猪舍实现了谊发与项目及合作伙伴间共同的合作
- Visit of the construction site of a 1500 sow farm, which is realized together with the cooperation project and its partners



与山西六马养猪科技有限公司开展项目工作（猪业）

Exchange with the demo farm Liuma (pig)



- 2020年11月项目专家在山西六马养猪科技有限公司现场指导
- On site visit of the demo farm Shanxi Liuma in November 2020
- 针对六马建立的生物安全体系开展咨询指导和复审工作
- Consultation and review of established biosecurity system of the farm
- 针对产仔和仔猪保育管理开展理论与实践培训
- Theoretical and practical training on farrowing and nursery management
- 与项目及合作伙伴就新建场内人工授精站展开筹备工作
- Preparation of the construction of an in-herd-AI-stud together with the cooperation project and its partners



技术指导手册及培训（猪业）

Manuals and trainings (pigs)



- 技术指导手册：猪场生物安全及母猪生产批次化管理、产仔、仔猪保育及后备猪饲养、中等规模人工授精站管理（由德方专家撰写，全国畜牧总站和中方专家审校，全国畜牧总站和中德畜牧业合作项目出版）
- Manuals on biosecurity and sow reproduction management, farrowing, nursery and pig rearing, medium size AI-station (draft by German expert, revision by NAHS and Chinese experts, publication by NAHS and project)
- 2020年3月25-28日，开展分娩舍管理线上培训班
- Online training on farrowing, 25.-28. March 2020
- 2020年4月27-30日开展保育管理线上培训班
- Online training on nursery, 27.-30. April 2020
- 2020年8月25-26日开展生猪无抗养殖网络研讨会
- Online webinar on “Antibiotic free feeding of pigs”, 25.-26. August 2020



资源网络建设及合作伙伴计划

Networking and partner arrangements

中德双方如何在现有项目阶段结束之后继续开展合作（此项目阶段于2021年6月结束）

How can German and Chinese can continue their cooperation after the current project phase (ending in June 2021)?

- 收集中德双方感兴趣的合作重点
- Capturing of interests on the Chinese and German sides
- 确定和协商合作提案
- Identification and elaboration of proposals for cooperation
- 潜在的合作领域（举例）
- Examples for potential cooperation
 - Brown Swiss cattle 褐牛
 - Cattle identification and data capture 动物识别和数据收集
 - Cattle breeding and type classification 牛只育种和体型外貌鉴定



宣传：微信平台（项目公众号）

Dissemination: WeChat Platform

- 发布项目技术信息
- Publication of technical information of the project
- 自2020年4月起，每周持续更新项目公众号内容
- Operating since April 2020 on a weekly basis
- Varied publication 公众号内容丰富多样
 - Technical manuals 技术指导手册
 - Training videos 教学视频
 - 报道及采访来自中德猪场和牛场的专家们
 - Reports and interviews with experts from Chinese and German cattle and pig farms
- 下载量阅读量增加（某次项目公众号更新的内容阅读量达1200人次）
- Increasing number of downloads (up to 1.200 for one contribution)
- 得到了来自国内养猪及养牛技术人员的积极反馈（并在德国加大推广力度）
- Excellent feedback from technical community on cattle and pig husbandry in China (and to a certain extend in Germany)



宣传：参加在成都举办的中国国际集约化畜牧展览会

Dissemination: Participation at EuroTier China in Chengdu

- 项目在德国展团参展，北京项目办公室的工作人员代表项目参展
- Participation of the project at the German pavillion, representation by the local staff of the project office in Beijing
- 与中方示范场和项目合作伙伴沟通交流
- Exchange with demo farms and business partners



宣传：在中德农业周上举办项目研讨会

Dissemination: Project conferences at the DCAW

- 中德畜牧业合作项目猪业育种项目研讨会
- Sino German Project Symposium on Pig Breeding
 - 网络研讨会：12月1日下午2:00–6:00
 - Online Event: December 1st from 2.00 PM to 6.00 PM
 - 此网络研讨会聚焦的主题为后非瘟时代重建国内猪群及生猪生产
 - The event focuses on the rebuilding of the pig population in China after the impact of the African Swine Fever (ASF).
- 中德畜牧业合作项目牛业育种项目研讨会
- Sino-German Project Symposium Cattle Breeding and Artificial Insemination
 - 线上线下结合网络直播研讨会：12月3日下午1:30–6:00，现场会议地点：北京
 - Hybrid event with online participation December 3rd from 1.30 PM to 6.00 PM in Beijing
 - 此研讨会聚焦的主题为奶牛及兼用牛品种的育种策略及种公牛站的组织和管理
 - The event focuses on breeding strategies for dairy and dual-purpose breeds and the organisation and management of AI stations.





Thank you very much for your attention! 感谢聆听!



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