

农学院教学实验中心简介 Introduction of Experimental Teaching Center of Agronomy College

农学院教学实验中心成立于 2005 年，由遗传工程实验室、植物生产与耕作学实验室、作物育种与种子工程实验室和农作物标本区组成。教学实验中心实行校院两级管理，中心主任负责制。中心主任由主管教学副院长兼任。中心每年承担农学、植保、园艺、葡萄酒、动物科学、创新学院 6 个学院 12 个专业的 1500 多名本科生的 15 门课程的实验教学任务。承担农学院 3 个专业的生产实践和农事操作课以及本科生和研究生的毕业论文科研工作。实验中心实验室面积 1800m²。500 元以上仪器设备 2000 台件，总价值 700 万元。中心拥有 PCR 仪、显微互动系统、电泳凝胶成像分析系统等 5 万元以上的仪器设备 20 台件，满足了现代实验教学的仪器需求。中心现有专职实验技术人员 15 名，其中实验研究员 1 名，高级实验师 5 名，实验师 3 名，高级技术工 6 名。实验中心获批省级实验教学示范中心两个；获得陕西省教学成果一等奖一项；发表教学改革论文 30 余篇；省级教学改革项目 2 项；主编教材 5 部。

The Experimental Teaching Center of Agronomy College was founded in 2005. Currently, there are three laboratories (laboratory of genetic engineering, laboratory of plant production and cultivation, laboratory of crop breeding and seed engineering) and one crop specimen sample area. Experimental teaching center implement two-level management by university and college, and centralized management system. The director of the center is appointed by the vice dean of teaching. Every year, the center undertakes fifteen courses about experimental teaching for 1,500 students from twelve majors of six colleges, including agronomy college, plant protection college, horticulture college, enology college, animal science technology college and experimental innovation college, it also undertakes some courses about production practice and farming operation for three majors from agronomy college and scientific research work for undergraduates and graduate students. The total area of the laboratory center is about 1,800m². There are 2,000 instruments with a price higher than ¥500. The total value of the instruments is ¥7,000,000. Among them, 20 instruments, including PCR instrument, microscope interaction system, electrophoretic gel imaging system and so on, which

price higher than ¥50,000. The instruments of lab meet the needs of modern experimental teaching. So far, there are fifteen full-time experimental technicians in this center, including one senior experimental fellow, five senior experimental technicians, three experimental technicians and six senior technical workers. The center won the prize of teaching achievement awarded of Shaanxi province, published thirty papers about the teaching reformation, was approved over two provincial teaching reformation items and published five textbooks.



专家指导中心工作



标本区建设规划

中心主任 Center Director



冯永忠，男，甘肃渭源人。西北农林科技大学教授，博士生导师，曾任西北农林科技大学农学院耕作教研室秘书、副主任，现任西北农林科技大学农学院副院长，中国农学会耕作制度分会副秘书长。主要从事循环农业、生物质能源、环境生态等方面的教学和研究工作。

主编《区域农业发展规划原理与案例》、《埃及尼罗河三角洲农作制调查研究》、《西北地区农村产业结构升级及调整战略研究》和《江河源区生态环境演变与质量评价研究》专著 4 部，获省部级科技进步二等奖 2 项，参编《农业资源与区划》国家级规划教材 1 部，主讲《农业生态学》、《农业资源与区划》、《农业区域发展及产业化》；申请获批国家专利 5 项，其中发明专利 2 项；主持和参加国家水污染重大专项、国家科技基础性工作专项重点项目、国家科技支撑计划项目、国家行业专项（农业）、国家自然科学基金、科技成果转化项目、林业局 948 项目、

陕西省 13115 重大科技专项计划项目等 30 余项国家级和省部项目；主笔完成陕西金台区、渭滨区、西咸新区秦汉新城、沣东新城、青海省海东国家农业科技园区、甘肃临夏县北塬循环农业示范区、陕西千阳县农业产业规划十余项；指导研究生 22 名，毕业 9 名。

FenYongzhong, comes from Weiyuan County of Gansu Province, professor, doctoral tutor. Former Northwest A & F University College of Agriculture, Department of farming secretary, deputy director, deputy director of the Department of agriculture, assistant director of the College of Agriculture. Now he is working as vice president of agronomy college of Northwest A & F University and China Agricultural Society farming system branch deputy secretary-general. Engaged in agricultural regional development and planning and design, Recycling of agricultural production process waste. Published more than 30 papers in the Renewable and Stable Energy Review, Applied Energy, Bioresource Technology, Ecological journals and other domestic and foreign journals.

中心副主任 Assistant Center Director



王竹林，博士，研究员。从事小麦抗白粉病研究、遗传学实验教学、实验方法改进、仪器设备新功能开发、教学实验室管理和建设等。先后主持国家自然科学基金、省自然科学基金等项目课题 10 余项。迄今共发表论文 60 余篇，其中 SCI 论文 6 篇。编写出版《遗传学实验指导》书 1 本，参编出版《遗传学》和《遗传学习题解析》等书 4 本。获得陕西省政府教学成果一等奖 1 项。

Wang Zhulin, Doctor, researcher. She is engaged in wheat resistance to powdery mildew, management and construction of laboratory, improvement in experiment method and new features development of equipment. She completed the national natural science foundation, provincial natural science foundation projects such as topic more than ten items. Written and published one book in genetics experiment guide, Participated in publishing book 4 in “genetics” and “genetic problem

resolution”and so on. She won the first prize in teaching achievements of government of Shaanxi province. She has published papers over 60.



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遗传工程实验室 Laboratory of Genetic Engineering

遗传工程实验室包括普通遗传学实验室，生物技术实验室和植物组织与细胞培养实验室。承担农学等 6 个学院的遗传学和农学院三个专业的生物技术、基因工程和植物组织和细胞培养等课程的实验教学任务。年开设实验项目 25 项。实验室同时为本科生毕业论文、课程论文、创新项目及研究生学位论文提供研究平台。实验室面积约 900m²。实验室现有仪器设备 1200 台件，总价值约 400 万元。

Laboratory of genetic engineering is comprised of general genetics laboratory, biotechnology laboratory and plant tissue and cell culture laboratory and covers an area of 900m². There are 1,200 instruments with a total value of ¥4,000,000. They service experimental teaching of genetics for students from Agronomy College, Plant Protection College, Horticulture College, Enology College, Animal Science and Technology College and Innovation Experimental College, and biotechnology genetic engineering and cell culture for students from Agronomy College. Every year, there are 25 experimental items carried out in this laboratory. Meanwhile, this laboratory also provides a research platform for undergraduate thesis, course papers, innovative projects and graduate dissertations.

实验技术人员

王竹林，博士，实验研究员，从事遗传学实验课程教学和实验中心日常管理。

胡甘，本科，高级实验师，从事遗传学实验课程教学和实验室管理。

车将，博士，实验师，从事遗传学实验课程教学和实验室管理。

孟敏，博士，实验师，从事遗传学实验课程教学实验室管理。

王小利，博士，高级实验师，从事生物技术和基因工程实验课程教学和实验室管理。

李立群，硕士，高级实验师，从事植物组织和细胞培养实验课程教学和实验室管理。



实验室相关图片



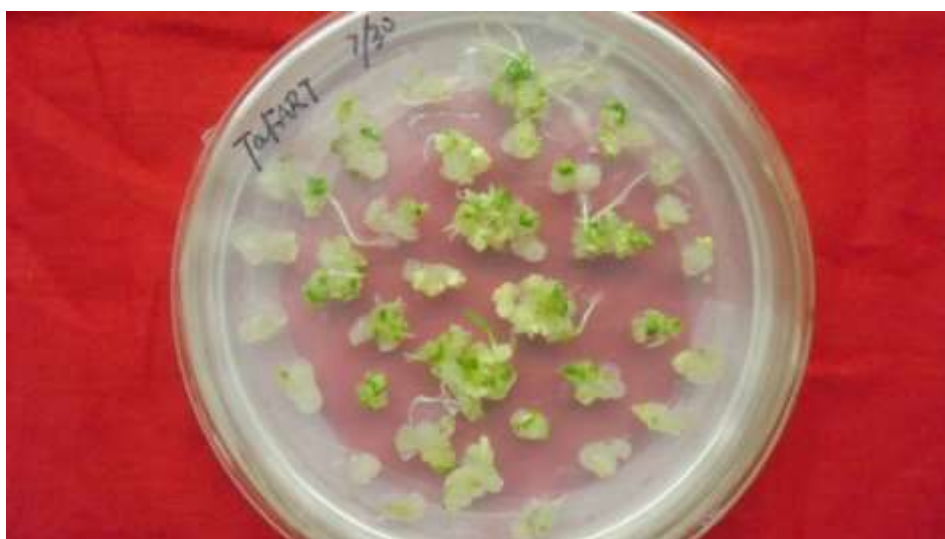
遗传学实验室工作指导



遗传学互动实验室



凝胶成像系统



小麦分化培养



实验准备



目的基因片段的 PCR 扩增实验

植物生产与耕作学实验室 Laboratory of Plant Production and Farming

植物生产与耕作学实验室设有 4 个分室：作物栽培学分室、农产品加工分室、植物化学分室和生物信息学分室。主要承担农学、植科、种子、植保和草业等专业的作物栽培学、农产品加工学、植物化学、生物信息学等课程以及研究生的试验设计与数据分析课程共 25 个实验项目的实验课教学任务。为本科生毕业论文、课程论文、创新项目及研究生学位论文提供共享平台。实验室使用面积约 600m²。实验室现有仪器设备 518 台件，总价值约 184 万元。

Laboratory of plant production and farming comprised of crop cultivation laboratory, agricultural products processing laboratory, phytochemistry laboratory and bioinformatics laboratory and covers an area of 600m². There are 518 instruments with a total value of ¥1,840,000. They service experimental teaching of seven courses, including crop cultivation, agricultural products processing, phytochemistry, bioinformatics, and so on, for students majored in agronomy, plant science and technology, seed science and engineering, plant protection, and experimental design and data analysis for undergraduate. Meanwhile, this laboratory also provides a research platform for undergraduate thesis, course papers, innovative projects and graduate dissertations.

实验技术人员

任慧莉，学士，高级实验师，从事植物化学、生物信息学和计算机数据分析实验课程教学和实验室管理。

杨智全，学士，实验师，从事作物栽培实验课程教学和实验室管理。

南春芹，硕士，三级技工，从事农产品加工实验课程教学和实验室管理。



DNA 序列的比对分析实验



薄层层析实验



芦丁的提取纯化与鉴定实验

作物育种与种子工程实验室

Laboratory of Crop Breeding and Seed Engineering

作物育种与种子工程实验室设有 2 个分室：作物育种实验室和种子科学实验室。承担种子形态结构观察、净度分析、种子水分测定、发芽试验、凝胶电泳及 SSR 分子标记鉴定种子纯度和真实性、品质分析等方面的教学实验及实习任务。承担种子学、种子生物学、种子检验学和作物育种学实验教学，为本科生毕业论文、创新项目以及研究生学位论文提供共享平台。实验室使用面积 182 m²，现有仪器设备 144 台件，总价值 143 万元。

Laboratory of crop breeding and seed engineering is comprised of crop breeding laboratory and seed science laboratory and covers an area of 182 m². There are 144 instruments with a total value of ¥1,430,000. They service experimental teaching of seed morphological structure observation, purity analysis, seed moisture determination, germination test, gel electrophoresis, seed purity and authenticity identification by SSR markers and quality analysis. They undertake experimental teaching of seed, seed biology, seed testing and crop breeding. Meanwhile, this laboratory also provides a research platform for undergraduate thesis, innovative projects and graduate dissertations.

实验技术人员



郑锦娟，硕士，高级实验师，从事种子学、种子检验学和种子生物学实验课程教学和实验室管理。



种子发芽实验



小麦种子醇溶蛋白聚丙烯酰胺凝胶电泳鉴定小麦品种真实性实验



正置显微镜



近红外谷物分析仪

作物标本区 Crop Specimen Area

作物标本区占地 3.6 公顷。承担食用植物类、工业用植物类、药用植物类、饲草饲料植物类和各种作物种质资源五大类数百个品种的提纯和保种。承担农学院 3 个专业的生产实践课、农事操作课、教学实践课和毕业论文工作。标本区全年接待学生实践教学 120 个班次，3500 人次。

Crop specimen area covers an area of 3.6 hectares. It undertakes the purification and preservation of hundreds of varieties in five categories including edible plants, industrial plants, medicinal plants, forage plant species and variety of specimens of crops. It also bears production practice class, farm operation class, teaching practice class and graduation thesis work of three professional of agronomy college. The specimen district completed 120 divisions of students' practice teaching, 3, 500 times a year.

实验技术人员

李德孝，副教授，标本区技术负责人。

严文献，三级技工，从事标本保种、生产实践课准备和标本区管理。

贾丽芳，三级技工，从事标本区标本保种和农事操作课准备。

田仲平，三级技工，从事标本区田间管理。

田公社，四级技工，从事标本区田间管理。

马永，四级技工，从事标本区田间管理。





生产实践课



农事操作课



标本种植管理



各类作物标本