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Maize Research Institute of Sichuan Agricultural University

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简介

四川农业大学玉米研究所历史悠久，其前身是1963年成立的以著名玉米遗传育种学家杨允奎教授任主任的数量遗传实验室，1997年发展为四川农业大学玉米研究中心，2000年更名为四川农业大学玉米研究所。

玉米研究所是“211”工程重点建设学科和国家重点学科“作物遗传育种”的主要支撑和建设单位之一，是教育部和四川省共建《作物基因资源与遗传改良》重点实验室的核心组成单位，于2011年获批为“西南玉米生物学与遗传育种重点实验室”。现拥有一支以中国工程院院士荣廷昭教授为领衔的研究队伍，主要从事玉米遗传育种和生物类相关专业领域的科研与教学工作，先后于1996年和2008年两次获得国家发明二等奖，获省部级奖励近20项，选育优良自交系10余个、玉米新品种50余个。主持承担国家级项目50余项、省部级项目70余项，主编或参编教材和专著30余本，发表论文近600篇，培养了大批优秀博士、硕士研究生，为西南地区的玉米科学研究和专业人才培养做出了巨大贡献。

BRIEF INTRODUCTION

Maize Research Institute of Sichuan Agricultural University enjoys a long history. It developed into Maize Research Center in 1997, and was renamed as Maize Research Institute in 2000, from Quantitative Genetics Laboratory established in 1963, and directed by professor Yongkui Yang.

Maize Research Institute is one of the main support and construction units for the “211 Project” and the national key discipline——“Crop Genetics and Breeding”, as well as the key laboratory for “Crop Gene Resources and Genetic Improvement” co-constructed by the Education Ministry and Sichuan Province. In 2011, it was approved as the key laboratory for “Maize Biology and Genetic Improvement in Southwest” by the Agriculture Department. The research team, directed by professor Tingzhao Rong (Academician of Chinese Academy of Engineering), focuses on maize genetics and breeding, and teaches on relative biological disciplines. The institute has achieved two second prizes of National Technological Invention in 1996 and 2008, about 20 provincial and ministerial awards. More than 10 elite inbred lines and 50 new maize varieties have been successfully improved. More than national projects as well as provincial projects are presided over and under research. More than 30 monographs and textbooks, and more than 600 academic papers have been published. A lot of outstanding doctor and master students have graduated. The institute has contributed a lot to maize scientific research and education of the southwestern region.

研究平台



RESEARCH PLATFORM

2011年，农业部批准玉米研究所建立“西南玉米生物学与遗传育种重点实验室”，装备有各类先进仪器设备，价值2000万元以上。现设分子生物学、基因工程、细胞工程、数量遗传与生物信息学和玉米育种学5个研究室，在四川崇州、多营和云南西双版纳试验基地拥有试验地30多亩。此外，在四川、贵州、内蒙等地还建有院士专家工作站等多个科研实习基地。

In 2011, the “Key Laboratory for Maize Biology and Genetic Improvement in Southwest” was approved to establish at Maize Research Institute by Agriculture Ministry, equipped with advanced instruments costing more than 20 million yuan.

There are 5 laboratories for molecular biology, genetic engineering, cell engineering, quantitative genetics and bioinformatics, and maize breeding. There are experiment fields more than 30 acres at Chongzhou, and Duoying stations in Sichuan, and Xishuangbanna station in Yunan. Besides, there are many experiment stations for the academicians and experts in Sichuan, Guizhou, Inner Mongolia, and so on.



内蒙古院士工作站
Experimental station for the academicians
in Inner Mongolia



云南西双版纳勐海基地
Xishuangbanna winter station in Yunan

实验室建设 Laboratory Construction



农业部西南玉米生物学与遗传育种重点实验室
Key laboratory for maize biology and
genetic improvement in Southwest China,
Agriculture Ministry



教育部作物遗传资源与遗传改良重点实验室
Key laboratory for crop genetic resources
and improvement, Education Ministry



紫外分光光度计
UV spectrophotometer



基因枪
Particle gun



荧光显微镜
Fluorescence microscope



高效液相色谱
High performance liquid chromatography

基地建设 Experiment Stations



多营实验育种基地
Duoying experimental station of Yu'an



云南西双版纳勐海基地
Xishuangbanna winter station in Yunan



崇州试验站
Chongzhou experimental station

科研团队

RESEARCH TEAM

由中国工程院院士荣廷昭教授带领的科研团队共有国家杰出高级专家1人、四川省学术技术带头人4人、四川省突出贡献的优秀专家5人、四川省学术技术带头人后备人选7人。

The research team, directed by professor Tingzhao Rong (Academician of Chinese Academy of Engineering), includes: 1 National Outstanding Senior Expert, 4 Science and Technology Leaders and 7 Alternates; and 5 Outstanding Experts of Sichuan Province.



院士风采

Academician Rong



中国工程院院士荣廷昭教授,现任四川农业大学玉米研究所所长,四川农业大学学术委员会主任,四川省科学技术协会副主席,中共四川省委、四川省人民政府决策咨询委员会委员,四川省作物学会名誉理事长。自20世纪60年代以来,一直从事作物遗传育种的教学和科研工作,在玉米遗传育种理论和方法、种质发掘与创新、新品种选育等研究方面卓有建树。先后选育了优良玉米自交系20余个和经过国家或省级审定的杂交种40余个,累计推广上亿亩,新增玉米40多亿公斤。主持获得国家技术发明二等奖2项,四川省科技进步特等奖1项,四川省科技进步一等奖2项、二等奖3项。在国内重要学术刊物以第一作者或责任作者发表论文300余篇,出版专著、教材6部。培养博士、硕士研究生70多名。

Professor Tingzhao Rong, academician of Chinese Academy of Engineering, is the director of Maize Research Institute, director of Academic Committee of Sichuan Agricultural University, vice president of Sichuan Association for Science and Technology, member of Advisory Committee for Policy Decision of the CPC Sichuan Provincial Committee and People's Government of Sichuan Province, and honorary chairman of Crop Science Association of Sichuan Province. Since 1960s, Professor Rong has been engaged in teaching and scientific research on crop genetics and breeding. He made great contribution to theory and method of maize genetics and breeding, exploration and innovation of germplasm resources, and breeding of new varieties. More than twenty elite maize inbred lines and forty hybrids were successfully bred and approved by national or provincial examination, and disseminated for hundreds of million acres with an increased maize output of more than 4000 kT. He won two second prizes of National Technology Invention, one grand prize, two first prizes and three second prizes of Science and Technology Progress of Sichuan Province. As the first author or responsible author, he has published more than three hundred papers in important academic journals, six monographs or textbooks. He has supervised more than 70 doctor and master students.

名师荟萃
 CORE FACULTY



科研成果



SCIENTIFIC ACHIEVEMENTS

玉米所先后获得国家技术发明奖二等奖2项、四川省科技进步奖特等奖1项、四川省科技进步奖一等奖4项、中华农业科技奖二等奖1项及其他省部级奖励11项。近年来，我所承担国家和省部级项目120余项，获得科研经费9000余万元，其中国家级纵向课题经费7000多万元；主编或参编《田间试验与生物统计》、《数量遗传学》、《西南生态区玉米育种》等专著或教材30余本；在《PNAS》、《DNA research》、《PloS One》、《TAG》、《Crop Science》、《中国农业科学》、《作物学报》等国内外知名主流期刊发表论文近1000篇。“十五”以来，选育玉米新品种50余个，累计推广上亿亩，新增玉米约40亿公斤，创社会经济效益40多亿元。

Maize Research Institute won two second prizes of National Technology Invention, one grand prize and two first prizes of the Science and Technology Progress of Sichuan Province, one second prize award of Chinese Agricultural Science and Technology, as well as 11 other provincial and ministerial prizes. In recent years, more than 120 national and provincial projects and more than 90 million yuan of scientific funds were obtained, more than 30 monographs or textbooks were published, and more than 600 academic papers were published on "PNAS", "DNA Research", "PloS One", "TAG", "Crop Science" and other famous scientific journals. Since the "Tenth Five Year Plan", more than 50 maize new varieties have been successfully bred and disseminated for hundreds of million acres with an increased maize output of more than 4000 kT, and economic benefits of 400 million yuan.



2006年中华农业科技奖
The second prize of Agricultural Science and Technology in 2006



1996年四川省科技进步奖
The grand prize of Science and Technology Progress of Sichuan Province in 1996

奖项

PRIZES



1996年获得国家技术发明奖二等奖
Second prize of national Technology Invention in 1996



2008年获得国家技术发明奖二等奖
Second prize of national Technology Invention in 2008



2007年获得四川省科技进步一等奖
The first prize of Science and Technology Progress of Sichuan Province in 2007



专著和教材
Monographs and textbooks



专业目录 | 人才培养

SPECIALTY CATALOGUE | EDUCATION

类别 Category	专业名称 Speciality
博士 Doctor	生物化学与分子生物学 Biochemistry and Molecular Biology
	作物遗传育种 Crop Genetic and Breeding
	种子科学与技术 Seed Science and Technology
科学硕士 Academic Master	生物化学与分子生物学 Biochemistry and Molecular Biology
	作物遗传育种 Crop Genetics and Breeding
全日制专业硕士 Full-time Professional Master	作物 Crop Science

注：作物遗传育种为国家重点专业，生物化学与分子生物学为省重点专业。
Notice: Crop genetics and breeding is national key constructive discipline, and biochemistry and molecular biology is the provincial key constructive discipline

联合培养：

JOINT TRAINING

通过国际合作项目和国家留学基金委“公派研究生项目”等渠道共派出18名博士先后前往墨西哥 CIMMYT、美国爱荷华州立大学、加拿大农业部生物技术中心、挪威生命科学大学等单位开展博士学位论文研究；其中与国际玉米小麦改良中心联合培养的博士研究生卢艳丽，以第一作者在《PNAS》(2010年SCI影响因子为9.43)等国际著名学术期刊上发表高水平学术论文10余篇，累计影响因子超过40。2012年卢艳丽的博士论文《不同类型玉米种质分子特征分析及耐旱相关性状的连锁-连锁不平衡联合作图》荣获全国优秀博士学位论，是全国玉米领域首篇优秀博士学位论文。

We sent total of 18 PhD candidates abroad to finish their doctorate thesis through international collaborations or CSC "government-sponsored graduate student project". The target institutes include Mexico CIMMYT, American Iowa State University, Ministry of Agriculture Biotechnology Center of Canadian, and Norway University of Life Sciences. For example, Yanli Lu did joint training at CIMMYT, and published a paper in "PNAS" (the impact factor of SCI in 2010 is 9.43), with accumulative more than 40 by the time she got her PhD. Moreover, her PhD thesis "Molecular Characterization of different maize breeding germplasm and joint linkage-linkage disequilibrium mapping for drought tolerance" won the National Excellent PhD Dissertation Prize, which is the first one that won such prize from the maize field.



卢艳丽博士荣获2012年全国优秀博士学位论文
Dr. Lu Yanli's dissertation ranked national outstanding
doctorate dissertation in 2012

荣获2012年全国优秀博士学位论文

题目：不同类型玉米种质分子特征分析及耐旱相关性状的连锁-连锁不平衡联合作图

导师：梁廷昭教授 曹国英教授 徐云碧研究员

作者：卢艳丽博士



玉米研究所与美国康奈尔大学、美国加州大学（圣地亚哥分校、伯克利分校、戴维斯分校）、美国爱荷华州立大学、美国新泽西州立大学、德国慕尼黑大学、北卡罗莱纳大学等世界知名学校合作，联合培养优秀博士生。

To train excellent PhD students, Maize Research Institute has established extensive cooperation with the world-famous universities, such as Cornell, The University of California (San Diego, Berkeley, Davis), Iowa State University, The State University Of New Jersey, University of Munich, and The University Of North Carolina.

奖助学金

SCHOLARSHIP AND GRANTS



玉米所专项设置了学农爱农奖学金、荣玉奖学金、登海奖学金、先锋奖学金等多种奖学金，激励优秀学生，加大人才培养力度。

To support outstanding students, a variety of special scholarships were set up by Maize Research Institute, including "Xuenongainong", "Rongyu", "Denghai", "DuPond-Pioneer" etc.

学生风采

STUDENT ACTIVITIES

开展丰富多彩的课余活动，愉悦身心，促进全面发展。

To promote the comprehensive development and delight the physical and psychological, interesting extracurricular activities are often organised.



国际交流合作



INTERNATIONAL COOPERATION

玉米所先后与法国、加拿大、荷兰、德国、美国、国际玉米小麦改良中心 (CIMMYT) 等国家著名大学和科研机构建立良好的合作关系。

Maize Research Institute established extensive collaborations with institutes around the world, such as France, Canada, Holland, Germany and the US.



2011年，玉米所被四川省科技厅授予“四川省玉米遗传育种国际合作基地”。近5年来，20余人次参加美国玉米遗传大会、亚洲玉米大会等国际会议，并做学术报告；邀请国外专家来访50余人次。“十一五”期间，主持申请或联合承担国际洛克菲勒基金、GCP、国家自然科学基金等国际合作项目等10余项。国际著名种业杜邦-先锋公司于2012年与玉米所正式建立合作关系，并启动专项设立研究生新生奖学金和应用基础研究科研基金。

In 2011, Maize Research Institute was approved as the International Cooperation Base of Sichuan Maize Genetic Breeding by the Sichuan Science and Technology ministry. In recent 5 years, more than 20 scientific research personnel or students attended the international and Asian maize genetics conferences to present their research. Meanwhile, more than 50 foreign experts were invited to visit Maize Research Institute. During the 11th five-year plan, more than 10 international cooperative projects were organized or co-organized. These were supported by Rockefeller Foundation, Generation Challenge Program, or National Natural Science Foundation of China. Maize Research Institute has established a formal cooperative relationship with DuPont-Pioneer in 2012. As a result, we set up scholarship for new graduate students as well as fund for essential applied scientific research.



2011年10月，玉米所与美国洛克菲勒基金会合作，在洛克菲勒基金会设立玉米遗传育种国际合作基地。



2011年10月，玉米所与墨西哥玉米小麦改良中心合作，在CIMMYT设立玉米遗传育种国际合作基地。



2012年10月，玉米所与美国杜邦-先锋公司合作，在玉米所设立玉米遗传育种国际合作基地。