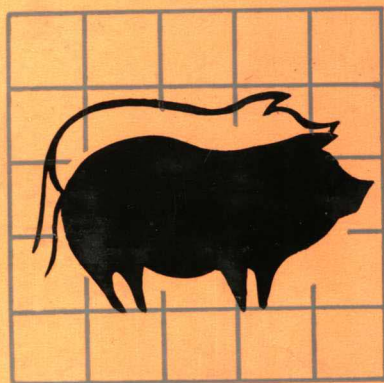


当代科技重要著作·农业领域

中国培育猪种

《中国培育猪种》编委会 编著



四川科学技术出版社

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编著者/《中国培育猪种》编委会

责任编辑·郭俊铨

封面设计·朱德祥

版面设计·杨璐璐

责任校对·郭俊铨

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《当代科技重要著作·农业领域》

序

当前,世界上正在兴起一场新的科学技术革命,自然科学已经猛增至两千多门学科,直接或间接推动着生产迅速发展。而科学技术图书是总结、推广新的科学技术革命成果、传播自然科学技术知识、交流科技信息、培养科技人才、提高人民科技水平和文化素质、积累基本资料的重要媒介和工具。翻译国外先进科技著作,是引进国外新的科学技术革命成果、先进科学技术最廉价、受益面最大的根本措施。因此,组织各方面的力量,系统地出版好我国的科技重要图书,已经是刻不容缓的任务了。中国出版工作者协会科技出版工作委员会基于这种情况,在1986年召开的全国科技出版社社长、总编辑第四届年会上,决定酝酿组织《当代科技重要著作》丛书,由全国一百五十多家科技出版社协作出版。科技出版工作委员会根据第四届年会的决定,发函广泛征求国内科技学者、专家的意见,得到了热烈的支持和高度的评价。科技出版工作委员会为此事向国家有关领导部门写过报告,得到领导的重视和支持。国家科委在起草《2000年前科技图书出版规划》建议时,便把这套丛书列为骨干系列书。

出版这套丛书,重点在于有计划及时地总结、推广国内专家的科学技术成果,全面、系统地引进国外科学技术,在于克服目前我国科技书籍出版中的盲目性,把力量用在刀刃上,使出版工作更有效地为促进我国科学技术事业发展服务,为四化建设服务。丛书按学科分成:生物技术、电子信息、航天、自动化、能源、激光、新材料、地质、煤炭、石油、冶金、机械、化工、建筑、水利电力、交通、铁路、邮电、轻工、纺织、农业、林业、医学、海洋科学、气象学、环境科学、国防科学、数学、力学、物理、化学、天文、地学、生物学、交叉科学、培训图书等36个领域,分批制定选题计划,用十年或更多一点时间把书出齐。

出版这套大而新的丛书,远非单靠我们科技出版社的同志所能完成。我们要依靠各个部门、各级领导。从确定出版方针、选择出书范围、宣传丛书意义、动员社会力量、筹集出版基金,都需要他们的领导。没有他们的参与,丛书的出版就会偏离方向,就会半途而废。我们要依靠广大的科技工作者,特别是了解并一向热情支持科技出版工作的知名专家,不但要请他们写书、译书,还要请他们同我们一起来规划丛书选题,组织著译者队伍,审读校阅稿件,提高图书质量。当然,我们科技出版社的同志,更应该兢兢业业,顽强拼搏,团结协作,无私奉献,高效工作,珍惜这一献身

四化、为子孙后代造福的机会,在这套丛书的工作上,把我们的全部力量使出来。

日本著名的岩波书店出版的《岩波文库》至今已出版 4600 多种重要著作,对日本科学技术和社会作出了积极贡献。我们是社会主义国家,如果集举国的力量于出版一套科技丛书上,一定能取得更加辉煌的成就。

中国出版工作者协会

科技出版工作委员会

1990 年 10 月

《中国培育猪种》编委会

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序

《中国培育猪种》是继《中国猪品种志》问世之后,第一部全面介绍我国培育猪种的专著。

我国养猪历史悠久,猪种资源十分丰富,是当前世界一个极其宝贵的品种基因库。

我国培育猪种的工作,始于国外优良猪种的引入及杂交改良我国猪种,广泛开展杂种优势利用的年代。但是,育成新的品种却是新中国成立以后的事情,特别是在1972年全国猪育种科研协作组成立之后,随着现代猪的遗传育种理论、品系繁育和选种方法等的广泛应用,才将我国猪的育种工作推向了一个新的历史阶段。建国41年间,在党和政府的重视和支持下,全国已有23个省(自治区、直辖市)育成了新品种(系)40个。这是我国养猪史上的一项重大成就,是我国猪育种工作者辛勤劳动的结晶,是全国猪育种工作者大协作的丰硕成果。编辑出版一部能够反映我国培育猪种的专著是我国养猪界同仁的夙愿。

为此,中国养猪协会(筹)于1989年委托其所属的科技开发部组织编写《中国培育猪种》一书。他们动员全国培育猪种主要完成单位的育种专家及科技工作者,通过报名认刊、草拟提纲、信函征求意见、编写初稿、拍摄照片、筹集出版经费等工作,共征集全国通过鉴定验收的35个品种(系)的稿件、照片。此后又组织有关专家对全部稿件、照片按《中国培育猪种》编写提纲的要求,进行反复修改,前后几易其稿,才完成了这部具有重要学术价值的专著。在此,我谨向本书的组织者、作者、编委会的同志们表示感谢和祝贺。

《中国培育猪种》的出版,对全国猪育种工作进行了历史性的总结,系统、全面地介绍了新品种、新品系的形成过程和育种工作经验,无论在生产上、学术上都具有十分重要的意义;为各地充分利用培育猪种资源,生产高效优质商品瘦肉型猪打下了基础;为建立我国猪品种基因库,开展生物工程研究,制订品种区域规划提供了科学依据;为在猪育种方面进行国内外技术合作和学术交流创造了条件。总之,本书必将对提高我国养猪生产和猪育种科技水平起到更大的促进作用!

郑丕留

1991年10月

前 言

为了系统、全面、科学地介绍建国以来 41 年间培育出的新猪种,总结新品种培育工作的宝贵经验,中国养猪协会(筹)于 1989 年作出决定,由协会的科技开发部负责组织编写《中国培育猪种》一书。

为完成此项重任,科技开发部于 1990 年 4 月在四川成都召开了第一次会议,就该书的编写、组织工作进行了研究,并向承担培育猪种任务的单位及其负责人发出了《关于编写〈中国培育猪种〉有关问题的通知》,并寄去《中国培育猪种》编写提纲。嗣后,又发出大量信件,敦请全国培育猪种的育成单位、育种专家和科技工作者就各自育成的猪种撰写材料、拍摄照片。

1990 年 11 月科技开发部的主任、副主任、常务理事和理事赴陕西省杨陵区集中,就征稿和筹资等事宜进行了具体研究。由于新猪种育成单位和育种专家的通力合作,共征集到各地已通过有关部门鉴定验收的 35 个品种(品系)的稿件和照片。

1991 年 1 月 7 日中国畜牧兽医学会养猪研究会在哈尔滨成立。养猪研究会科技开发部亦受托承担《中国培育猪种》的编审任务。会上就《中国培育猪种》的稿件和照片质量、编委会组成、经费筹集等问题进行了商讨。

1991 年 4 月 18 日中国养猪协会(筹)、中国畜牧兽医学会养猪研究会科技开发部负责人和主要编委 11 人在湖南省慈利县召开了《中国培育猪种》编审会。采取分工审阅、集体讨论、重点把关的方式,对所有稿件进行了评审和修改。对资料不完善、体例不规范的稿件和质量较差的照片,由专人负责与作者联系,请他们补充资料 and 提供更好的照片。

同年 7 月 26 日到 8 月 4 日,中国畜牧兽医学会养猪研究会副理事长赵志龙、段诚中,学术部主任韩光微,开发部主任刘孟洲,副主任喻春元、龚克勤,委员孙承琮、谢生豪以及邓银才、邝声跃等,在青海西宁市开会,讨论修改了包括概论、各论在内的所有文稿,并决定将文稿再返回各编委和原作者作进一步修改补充。

为了保证本书质量,使这一重要著作早日问世,向全国猪育种科研协作 20 周年献礼,1991 年 9 月 24 日在北京中国农业科学院,再次召开了由主编、副主编及在京顾问参加的定稿会。

经过上述努力,科技开发部和编委会成员对建国 41 年来培育猪种的分布、数量、现状,品种、品系的培育过程和方法,种质特性和生产性能,杂交优势利用情况以及对品种、品系的评价与展望等都有了深刻的认识,许多疑难问题得到解决。由

于育种单位、育种工作者与科技开发部和编委会的真诚合作,《中国培育猪种》一书的编写无论在广度或深度上都具一定水平。

《中国培育猪种》分概论和各论两大部分。概论通过对 35 个培育猪种的深入研究,重点论述了培育猪种的育成简史、类型划分和特征特性比较,选育理论、选育方法及种质研究进展,推广利用及品种前景等问题。通过这部分的总结,力求对中国培育猪种的发展史、分类、育种方法、育种理论提出新的见解。各论共编入了 35 个品种、品系(尚有 5 个品种、品系未能编入)的有关资料。其中白色猪种 16 个,黑色猪种 14 个,花色猪种 5 个。每个培育猪种都按产地和分布、品种形成过程、育种方法及种质研究、生产性能与特征特性、杂交利用以及评价展望等项加以阐述。本书在撰写中力求突出各品种特点,突出各品种的培育方法;对种质研究结果的表述和各类资料、数据的引用都力求准确、科学、可靠,进行科学的分析,并作出理论的概括,而不仅仅是罗列一大堆资料。每个品种均附有能显示其品种特征的母猪彩色标准照片。书后附有各培育猪种产区、所用亲本、杂交方式、育成年代、生产性能、杂交利用及主体杂交组合等分类表。

《中国培育猪种》的编著,不仅是对数十年积累的培育猪种资料的整理过程,也是一次深入的研究过程,为全面、系统总结建国以来畜禽育种工作开了先河。本书的出版不仅对建国 40 年来的猪育种工作做了全面的、历史性的总结,而且还较系统地、深入地介绍了新品种、新品系的形成过程和特征特性。可以断言,今后本书对指导各地利用培育猪种资源,制定品种改良计划,开展杂交优势利用,生产优质商品瘦肉型猪都将起到重要作用,同时对教学、科研,对促进国内外学术交流和技术合作,也具有重要价值。

编写这部著作,对我们来说是一次新的尝试,追溯年代久远、涉及全国数十个品种的育成历史和现实情况,工作难度很大,以致还有一些品种、品系暂时未能编入书中。限于编著者水平,承此重任,虽竭尽全力,或可差强人意,但书中错讹实难尽免,恳望学界同仁指正,以期再版时补充和完善。

《中国培育猪种》编委会

1991 年 9 月 24 日

于北京

PREFACE

For the sake of systematically, comprehensively and scientifically introducing the new swine breeds that having been released in China ever since forty one years after the Founding of PRC, it is necessary to summarize those precious experiences accumulated in swine breeding and selection work. The Chinese Association of Swine Science (CASS, Preparatory Committee) has determined in 1989 that under its sponsorship, the Department of Scientific and Technological Development (DSTD) must be in charge of compiling the book by the topic of 'Swine Breeding in China'. For the accomplishment of this important task, the foresaid Department was convening a conference for the startingwork in Chengdu, Sichuan Province, in April, 1990 and launching discussion on its compilation and organization work and in the meantime, issuing a notice about the related problem as to how to organize to write this book by the respective academic institutions and their persons in charge, especially drafting an outline. Not long afterwards, through mailing large quantities of articles in exchange, cordially requesting the administrative, productive and scientific research units or those swine breeding experts that have been participating in those work all over the Country respectively to take pictures of their swine breeds concerned. All the directors, vice directors, standing counselling members as well as ordinary members of the Association at that time were discussing about the concrete solicitation of manuscripts delivered and fund-raising affair in Yanglin, Shanxi Province, in November, 1990. Owing to the full collaboration of those new swine breeds culturing units, the collection of manuscripts and related pictures of swine breeds (or strains), with a total of 35 had been checked and accepted in time by the responsible administrative units. The Swine Raising Research Institution (SRRI) under the auspices of the Chinese Society of Animal and Veterinary Sciences (CSAVS), then was set up

in Harbin on January 7, 1991, having been entrusted with responsibility, the sponsored DSTD of the SRRI was undertaken for reading and editing this for-mentioned book as well. At the Conference, they not only were discussing about enhancing qualities of both manuscripts and pictures, but also talking about forming an editorial board and fund-raising problems therefrom.

On April 18, 1991, the chief editorial members of the CASS (Preparatory Committee) and its foresaid DSTD men in charge were meeting together and talking about the book reading and editing affairs and passing round the manuscripts concerned for perusal in Cili County of Hunan Province. By way of sharing out manuscript examination and revision, cooperative discussion as well as checking at focal points in compilation, all the members attending at the meeting made themselves responsible for the reading and edition work together on all those manuscripts delivered. As to those manuscripts and pictures attached with imperfect quality and regulations out of standards that requiring to make major revisions, they must have been done through mutual correspondences with individual authors respectively by necessarily adding in formations and pictures of better qualities. From July 26 to August 4, the same year, at the SRRI of the CASVS, the vice councillors, Messrs Zhao Zilong and Duan Chenzhong; the DSTD Academic Department Director, Mr. Han Guangwei and the same DSTD Development Director, Mr. Liu Mengzhou together with their Vice Directors, Messrs Yu Chunguang and Gong Keqin as well as Commissioners, Messrs Sun Chenzong, Xie Shenhao, Deng Yincui and Kuang Shengyue and so on were face to face discussing with each other and revising all the manuscripts inclusive of general introduction and respective swine breeds descriptions word by word and sentence by sentence in Xining City, Qinghai Province. At the Conference, all attending members were adopting a decisive way of mailing each other afterwards instead of meeting, returning the manuscripts in reprint form to the editorial committee and even the original authors for final revisions of the foresaid general introduction and its respective descriptions. For ensuring the fine quality and earlier publication of the book in order to present it as a gift in commemoration of the swine breeding and research cooperation all over the Country, on September 24, 1991, the manuscripts finalizing conference was convening again together with the chief editor, all concerned co-editors and consultants attended for discussion at

twice occasions at the Chinese Academy of Agricultural Sciences (CAAS) in Beijing.

After making such great efforts as above ,the members of the DSTD and its editorial committee have learnt lots of knowledges and knowhows about swine breeds culturing affairs with their distributions, present situation, breeding procedures and methods as well as quantities and qualities of breeds (including strains) released, germplasm characters and productive performances, utilization of hybrid vigor in crossing, evaluation and outlook of breeding and selection and so on since 41 years elapsed after the Founding of PRC. In the meantime, there were many difficult problems thereby having been solved eventually. Due to the sincere cooperations among swine breeding units and their workers together with the DSTD editorial committee, the compilation of this book not only has been in success to a large soope, but also to a higher level up to the present simultaneously.

The book is now divided into two parts, the general introduction and description of different swine breeds. Through a thorough study on a number of 35 breeds (including strains), the focal point is to discuss on the breeding and selection processes in brief, typical classification of breeds or strains, comparison of some features and characteristics in certain breeds or strains, theories and practices of breeding and selection as well as research progresses in various germplasm materials, extension, utilization and breeds culturing prospects and so on. By now, in China, those new opinions and views through all these conclusions in time are presented in brief about the breeding and selection processes of swine, classification of their breeds or strains, breeding methodologies and pertinent theories when summarized at work. Thirty five breeds or strains of swine have been written in detail, but only with the exception of five pending to be added or revised. Among them, there are sixteen white, fourteen black and five colored swine breeds (including strains) included. All these swine breeds or strains are described thoroughly in accordance with their producing sites of distribution, breeding procedures and their respective ways of formation, productive performances for each and every, utilization of hybrid vigor as well as evaluation work and outlook for the swine breeds during culturing process. For them, both general and individual characters are involved in description. Upon writing, all about their individual characters and perfor-

manances during their breeding and selection processes were emphasized with highlights. As a result of research and investigation in swine germplasm materials, various data are utilized and weighed up for use in exactness and precision in description and collection of informations related, scientifically and reliably, to a certain extent and higher level. Upon scientific analysis and study, all articles quoted must have to be generalized to the category of theory, rather than only enumerating a lot of materials or facts. For every breed or strain, boar and sow taken with standardized colored pictures are attached in this book abling to demonstiate their respective clean-out breed characteristis. In addition, there are tables as according to classified producing areas of each and every swine breed released, their names of parents used, ways and means in crossing, years of generation for breeding and selection, productive performances, utilization of hybrid vigor as well as combinations in crossing are attached in the book postscripts for public references.

From the viewpoint of starting compilation of this book entitled 'Swine Breeding in China', it is not only an assortment process of swine breeding and selection material accumulated for several decades, but also a scientific research course needing quite deep approach of this sort of subject from different angles, in itself, being such an over and over systematized academic conclusion since the Founding of our Socialist Fatherland, we have been surely becoming a forerunner in this respect in doing this work on the breeding study of animal and poultry sciences for the first time.

For us, writing this book is just an attempt entirely new for the fact that our tracing for events historically in writing is marked with passages of long times, but also it will involve certain ranges so as to include all over the PRC proper for forty one years elapsed since the Founding in 1949 even with the breeding historical events for about the origin of several ten swine breeds and their realistic status. For instance, our difficulties in compilation work were very complicated, even there were, however, many breeds or strains in swine being not able to be systematically introduced into the category of this book compilation for the time being, that is very important to the direction of utilizing these swine breeds resources in any rural extension areas, laying down the improvement project of such breeds by means of hybrid vigor utilization so as to produce fine lean-meat swine breeds. This book, say, will play an important

role in teaching assignment, scientific research work as well as in the sphere of scientific and technological information interchange and mutual cooperation within the sphere of international influences.

In a word, our editorial work is very difficult indeed for the fact that there are many limitations by ourselves in urgent need of all sorts of useful knowledges, scientific or aesthetical, for undertaking this important task that needs us doing our best, but nevertheless, still being quite hard to prevent from any little errors occurred during routine work of book compilation in this respect, so that we are in the sincerest expectation that this book should be rechecked by all warm-hearted collaborators working in this special line of swine raising industries and also be supplemented and perfected in the nearest future when it will come out for the public as well as for the revised edition afterwards.

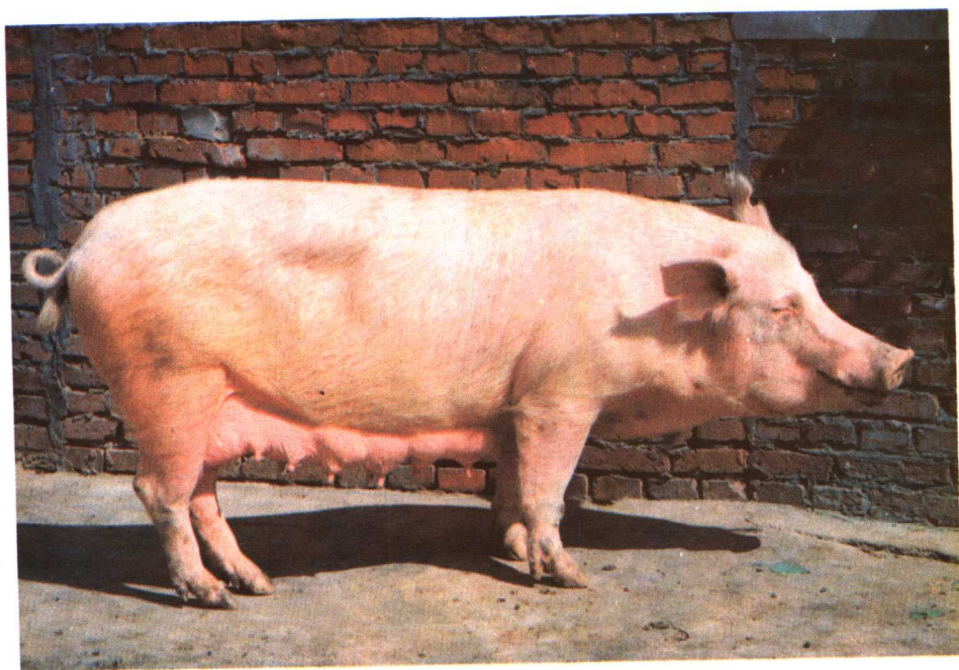
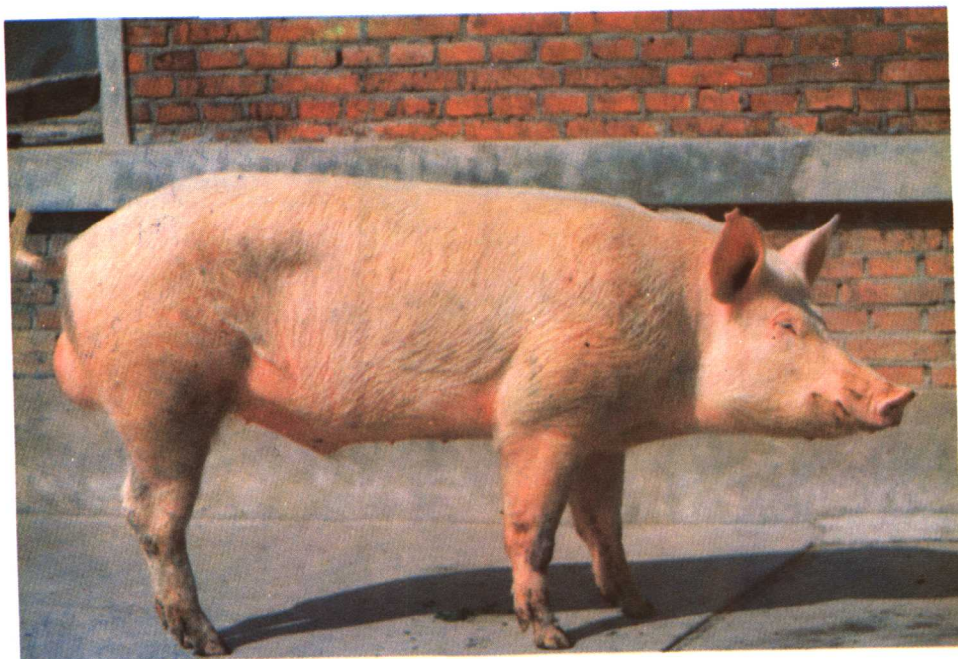
The Editorial Committee

September 24, 1991

本书计量单位符号

m	米
cm	厘米
mm	毫米
μm	微米
km	千米(公里)
g	克
mg	毫克
μg	微克
pg	皮克(10^{-12} 克)
kg	千克(公斤)
t	吨

μmol	微克分子
L	升
ml	毫升
dl	分升
J	焦[耳]
kJ	千焦[耳]
MJ	兆焦[耳]
s	秒
min	分
h	小时
d	天



哈尔滨白猪 ♂/♀

HARBIN WHITE SWINE