



# 农业信息技术与 信息管理

AGRICULTURAL INFORMATION TECHNOLOGY AND  
AGRICULTURAL INFORMATION MANAGEMENT  
2002

中国农业科学院科技文献信息中心

Sciencetech Documentation and Information Center  
Chinese Academy of Agricultural Sciences



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# 前 言

中国农业科学院科技文献信息中心经过几代人的奋斗，已成为全国农业信息科技领域最大的研究与公益服务机构。多年来，我中心科技人员在农业信息技术、农业信息管理、农业信息资源、农业信息传播、数字化农业、数字化图书馆、农业情报与信息分析，以及农业宏观研究等学科领域方面承担了大量的研究任务，取得了多项研究成果，发表了许多学术论文。为充分检阅和展示这些成绩，尊重和激励广大科技人员的创造性劳动，更广泛地宣传和应用这些研究成果，我们将中心科技人员每年发表的学术论文和撰写的科技报告选编成册，出版《农业信息技术与信息管 理》一书，每年出版一本，2002 年度是第一本。

党的“十六大”提出，统筹城乡经济社会发展，建设现代农业，发展农村经济，增加农民收入，是全面建设小康社会的重大任务。完成这一任务，重点在农村，难点在农民，关键在科技。以生物技术和信息技术为代表的前沿科技，近年来在全球发展迅速。农业信息技术越来越受到世界各国的高度重视，并被列入各国重点发展计划，世界许多发达国家的信息行业从业人数远远超过农业人数，达到从业人数的半数以上。农业信息技术的发展，在经历了以科学计算为主的农业计算机应用阶段、以数据与模拟模型研究为主的知识处理阶段以后，正在向日趋成熟的农业信息技术高水平网络化、智能化、数字化方向发展。我国近年来对农业信息技术发展十分重视，不断加大对农业信息技术的支持力度，相继建立了一大批数据库，积累了大量的农业信息资源，研制出一批农业专家系统，取得了一批重要的科研成果。中国农业科学院科技文献信息中心将要在国家农业战略信息资源建设和农业信息科技创新中承担更为重要和艰巨的任务。出版这本书，就是基于世界农业信息科技迅猛发展和我们应该承担的责任这样一

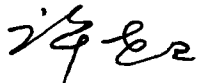
个大背景而进行的。

2002年《农业信息技术与信息管理》，共选编了我中心研究人员该年度的论文与科技报告48篇，分农业信息化战略、农业信息技术、农业信息管理、农业信息分析、科技期刊编辑、农业宏观研究5个部分，收录了我中心科技人员对新阶段农业信息化内外环境发展、农业信息资源管理、农业信息技术开发与应用、农业科技期刊编辑与出版，以及粮食安全、食物与营养、农业科技信息、市场信息分析等方面的研究成果。

本书附录中还收录了中国农业科学院科技文献信息中心组织机构和负责人的名单，以及2002年在研课题、出版著作以及鉴定和获奖成果的情况。

为方便交流，收录的学术论文和科技报告的题目和作者采用了中英文两种文字。文中学术观点和其他文责由作者本人负责。我们希望通过本书的出版，进一步得到社会各界与科技同行对我们工作的关心与支持，不断提高我中心的科技创新能力、公益服务能力和产业发展能力，共同为我国农业信息科技事业发展做出新的贡献。

中国农业科学院科技文献信息中心主任



2003年6月

# PREFACE

The Sciencetech Documentation and Information Center (SDIC), Chinese Academy of Agricultural Sciences has been the largest research and non-for-profit organization in agricultural scientific and technical information areas in China through profound efforts of several generations. For many years, SDIC professionals have undertaken great amount of research tasks, received various research achievements and presented academic papers and works in agricultural information technology, agricultural information management, agricultural information resources, agricultural information dissemination, digital agriculture, digital library, agricultural information analysis, agricultural macro-economy and etc. In order to display these achievements, encourage the innovative contributions of the professionals and widely distribute and use these achievements, we have selected the papers of our staff from recent years' publications to compile this book, named *Agricultural Information Technology and Information Management* which will be published annually from this first issue in 2002.

The 16th Conference of the Communist Party of China has stated that it is the most important task to generalize economic development in urban and rural areas, conduct modern agriculture, develop rural economy and increase income of farmers in completely constructing a modernized society. The emphasis is given in the rural areas, difficult factors are on the farmers and the key is science and technology in fulfilling the task. The forefront science and technology represented by biotechnology and information technology has been developing fast globally. Agricultural information technology has been getting more and more attention from countries of the world and placed in each country's key development plan and the amount of personnel in information sciences in many coun-

tries is up to 50 % of the employees which is far more than the amount of people in agricultural sector . The development of agricultural information technology is going toward more matured high level information technology including networking , intelligentizing and digitization following the computing stage by using computers and knowledge control stage of taking data and simulation and models as the main research . The Chinese government has paid great attention to agricultural information technology and constantly enhanced the assistance to it . Various kinds of databases have been constructed and large amount of agricultural information resources have been accumulated , a series of agricultural expert systems have been studied and all of these produce many important scientific research results . SDIC , CAAS will undertake even more important and significant tasks in construction of national agricultural strategic information resources and scientific information innovation . This publication is prepared under such an amazing background of fast development of agricultural information technology and based on the obligations we should take .

*2002 Agricultural Information Technology and Information Management* has selected 48 papers from SDIC professionals in the same year . It divided into 5 parts : Agricultural information strategy , agricultural information technology , agricultural information management , agricultural information analysis , scientific journals editing , and agricultural macro – economy which reflects the views and research achievements of our professionals in the internal and external agricultural information environment , agricultural information resources management , development and use of information technology , scientific journals editing and publishing , as well as food safety , food and nutrition , agricultural scientech information and marketing information analysis and etc . at the new stage .

The appendix provides SDIC , CAAS organization structures and responsible persons as well as the current research projects , published works and awards in 2002 .

For better exchange , the selected papers and scientific reports titles as



well as author names are both written in Chinese and English. Authors will be responsible to their academic views. We hope that, through the publication, we may have further concern and support from our colleagues and other sectors of the society, and may continuously promote our scientific innovation ability, public services ability and industrial development ability of providing new contributions to the national agricultural scientech information cause.

Director General, *Xu Shiwei*  
Scientech Documentation and Information Center,  
Chinese Academy of Agricultural Sciences

June, 2003

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