

农业信息技术与

信息管理

AGRICULTURAL INFORMATION TECHNOLOGY
AND INFORMATION MANAGEMENT

2010

中国农业科学院农业信息研究所

Agricultural Information Institute,
Chinese Academy of Agricultural Sciences

中国农业出版社 CHINA AGRICULTURE PRESS

农业信息技术与信息管理

AGRICULTURAL INFORMATION TECHNOLOGY AND INFORMATION MANAGEMENT

2010

中国农业科学院农业信息研究所

Agricultural Information Institute, Chinese Academy of Agricultural Sciences

中国农业出版社 CHINA AGRICULTURE PRESS

图书在版编目 (CIP) 数据

农业信息技术与信息管理 . 2010/中国农业科学院农业信息研究所编 . —北京:中国农业出版社,2012.1 ISBN 978-7-109-16517-5

I.①农··· II.①中··· II.①信息技术-应用-农业 -文集②农业经济-经济信息-信息管理-文集 IV. ①S126-53②F302.4-53

中国版本图书馆 CIP 数据核字 (2012) 第 009854 号

中国农业出版社出版 (北京市朝阳区农展馆北路2号) (邮政编码100125) 责任编辑 刘爱芳

 中国农业出版社印刷厂印刷
 新华书店北京发行所发行

 2012 年 1 月第 1 版
 2012 年 1 月北京第 1 次印刷

开本: 787mm×1092mm 1/16 印张: 25.25 字数: 435 千字 印数: 1~3 000 册 定价: 60.00 元 (凡本版图书出现印刷、装订错误,请向出版社发行部调换)

编委会

顾 问 刘 旭 梅方权

主 编 许世卫

副主编 王东阳 刘 俐 孟宪学 王文生

骆建忠

编 委 (按姓名笔画排序)

王 川 王 玲 王义明 王文生 王东阳 于迎建 冯艳秋 皮介郑 刘东刘俐 刘世洪 许世卫 李云霞 李志强 李秀峰 李哲敏 杨利 杨和良 杨晓蓉 张 峭 张蕙杰 严定春 陆美芳 张学福 孟宪学 赵瑞雪 邵长磊 周国民 骆建忠 聂凤英 诸叶平 程海鹏

魏虹

瑀

编辑人员 骆建忠 刘世珍 崔时宁 王

颜 蕴

路文如

2010年,是中国农业科学院农业信息研究所用党的十七届四中、五中全会精神统领各项工作,建设学习型组织,打造创新型团队,全面总结"十一五",合理布局"十二五",继往开来,和谐发展的关键年;是全体信息所职工抓住机遇,克服困难,埋头干事业,一心谋发展的关键年。在农业部领导一如既往的关心支持下,在中国农业科学院党组的始终正确领导下,2010年信息所紧紧围绕稳定、和谐、发展的工作主旨,积极做好农业信息科技创新、农业信息公益服务等主体工作,以创新立所,以管理强所,以服务兴所,圆满完成了各项任务目标,取得了良好的发展成绩。2011年,农业信息研究所将在深入学习科学发展观的基础上,以研为本、以人为本,力促农业信息科技事业的全面、协调和可持续发展。

《农业信息技术与信息管理》从 2002 年起每年公开出版一册。主要是将我所科技人员当年发表的学术论文和撰写的科技报告选编成册,以充分检阅和展示这些成绩,尊重和激励全所科技人员的创造性劳动,更广泛地宣传和应用好这些研究成果。

《农业信息技术与信息管理 2010》集中反映了 2010 年我所在农业信息技术、农业信息管理、农业分析等学科领域的科研进展、收集了科研人员在农业信息系统管理、农业信息智能分析、农业信息网络技术、农业数据库建设、农业信息资源管理、农业信息化、农产品供求分析、期刊编辑等方面的研究论文与探讨类文章。

《农业信息技术与信息管理 2010》共选编了我所研究人员 2010 年度的论文与科技报告 42 篇,分农业信息化战略、农业信息技术、 农业信息资源管理、农业信息分析、农业科技期刊5个部分。

本书附录中收录了中国农业科学院农业信息研究所组织机构和负 责人的名单,以及2010年部分在研课题、出版著作和译著、获奖成 果、登记的计算机软件等情况,还选编了我所大事记,以进一步增强 本书的纪实性。

为方便交流, 收录的学术论文题目和作者采用了中英文两种文 字。我们希望通过本书的出版,进一步得到社会各界对我们工作的关 心与支持,不断提高我所的科技创新能力、公益服务能力和成果应用 能力,也希望能通过这种形式加强与科技同行的学术交流,共同为我 国农业信息科技事业发展作出新的贡献。

中国农业科学院农业信息研究所所长

2011年2月

Foreword

2010 is a critical year when the Agricultural Information Institute, Chinese Academy of Agricultural Sciences (AII - CAAS) had used the spirit of the Fourth and Fifth Sessions of the Seventeenth Central Committee of the Party to command all tasks, build learning type organizations, create innovation teams, summarize the Eleventh Five-year Plan, reasonably arrange the work for the Twelfth Five-year Plan, inherited the past and ushered in the future and developed in harmony, and a critical year when all the staff of the AII - CAAS had seized the opportunity, overcome difficulties, quietly immersed in undertakings, and focused on selfdevelopment. Under the concern and support by the Ministry of Agriculture and the correct leadership of the Party Group of the Chinese Academy of Agricultural Sciences, in 2010, closely encircled the dominant themes of stability, harmony and development, by building the Institute through innovation, promoting the Institute through management and invigorating the Institute through services the AII - CAAS had actively done a good job in agricultural information science and technology innovation, agricultural information public welfare and other major work, and fruitfully completed various kinds of tasks and objectives and gained good development achievements. In 2011, on the basis of deeply studying the outlook on scientific development, the AII - CAAS will be people-oriented and researchoriented, and strive to gain a comprehensive, coordinated and sustainable development of agricultural information science and technology undertakings.

"Agricultural Information Technology and Information Management" has been published each year since 2002. It mainly collects academic papers and science and technology reports written by the research staff of the AII – CAAS, so as to fully review and demonstrate these achievements, show respect and encourage the creative labor of all the staff, and propagate and better apply these achievements even more extensively.

"Agricultural Information Technology and Information Management (2010)" has centrally reflected the research progress of the AII - CAAS in 2010 in agricultural information technology, agricultural information management, agricultural analysis, and other disciplines, and collected research papers and

discussion articles written by research staff in the aspects of agricultural information system management, agricultural information intelligence analysis, agricultural information network technology, agricultural database construction, agricultural information resources management, IT application in agriculture, farm produce supply and demand analysis, agricultural periodical editing, etc.

"Agricultural Information Technology and Information Management (2010)" has selected 42 papers and science and technology reports written by the research staff of the AII-CAAS in 2010. It is broken down into five parts: Strategy for IT Application in Agriculture, Agricultural Information Technology, Agricultural Information Resources Management, Agricultural Information Analysis, and Agricultural Science and Technologly Periodicals.

The Appendixes of this monograph have collected a list of the organizations of AII – CAAS and their responsible people, as well as partial on-going research projects, published monographs and translations, prized research achievements, registered computer software packages, and other situation in 2010. In addition, it contains Chronicle of Events of the AII – CAAS so as to further strengthen the records of actual events of this monograph.

For the convenience of communication, this book has collected the titles and author of the academic papers in both Chinese and English languages. We hope that through the publication of this monograph, we can further get the concern and support of our work by all walks of life in the society, continue to improve our science and technology innovation capacity, public welfare service capacity and industrial development capacity, strive to strengthen academic exchange with science and technology colleagues through this form and jointly make new contributions to the development of agricultural information science and technology undertakings in China.

Kushi wei

Director-General
Agricultural Information Institute,
Chinese Academy of Agricultural Sciences (AII - CAAS)

3 泉

前言

农业信息化战略

| 3G |
|--|
| 塞了一 |
| 农业信息技术 |
| Design of Agent-based Bee Product Quality Control System 诸叶平等 (27) |
| VC++非托管模式下使用 STL 模拟数据集 DataSet |
| Evaluation of Digital Maize Planting and Management System |
| Based on Simulation Model 李世娟等 (45) |
| 基于 UCC/EAN - 128 条码的粮油产品追溯标签的设计与实现 |
| 农业科技信息核心元数据标准及其计算机著录研究 崔运鹏等 (60) |
| An Architecture for the Agricultural Machinery Intelligent |
| Scheduling in Cross-regional Work Based on Cloud |
| Computing and Internet of Things |
| Research on 3G Technologies-based Agricultural Information |
| Resource Integration and Service |
| Design and Realization of the ZH/EN Bilingual Retrieval System |
| Based on the CAT/AGROVOC Mapping |
| 农业信息资源管理 |
| 面向科研团队的个性化信息环境建设 |
| 坚实的足迹——记 NSTL 网络参考咨询服务工作的发展 皮介料 (106) |
| 外文文献数据加工中的质量控制 李 迪 (113) |
| .1. |

| 基于引文分析的农业科研人员外文文献需求与保障研究 续玉红等 | (118) |
|--|-------|
| 国外图书馆信息服务模式的启示 王玉芹等 | (126) |
| Aleph500 与金盘图书馆集成管理系统 GdlisNet 的比较分析 杨海燕 | (133) |
| 中国农业科学院电子文献资源建设现状及发展策略 王 婷等 | (140) |
| 我国农林学科研究生教育动态数据库平台设计与实现 寇远涛等 | (147) |
| 完善 NSTL 代查代借服务 为用户提供满意服务 王晶静等 | (156) |
| NSTL 外文期刊引文数据自动化拆分的研究与实践 鲜国建等 | (162) |
| 数字资源长期保存工作的问题 | (171) |
| 基于加快预算执行进度的分析与思考 | (176) |
| 农业信息分析 | |
| 食物安全中的溃堤效应分析 | (105) |
| 我国农产品在产销间价格传导机制研究 | |
| 新时期我国粮食安全形势和对策 | |
| 我国畜产品市场价格风险度量与分析 | |
| 基于 VaR 的我国水果市场价格波动风险度量研究 王川等 | |
| 中国禽蛋产业链短期市场价格传导机制 | |
| 不同特征村庄村民公共项目投资方向偏好比较研究 董晓霞等 | |
| 农产品市场价格超短期预测研究 | (234) |
| ——基于番茄日批发价格的现代时间序列法建模 李千琼等 | (263) |
| 大蒜价格快速上涨引发的思考 | |
| 2009 年奶业市场分析及 2010 年展望 | |
| 中国鹿类动物遗传相关试验分析研究简述 | |
| 农作物单产风险分布对保险费率厘定的影响 | (200) |
| ——以新疆三县(市)棉花单产保险为例 王克等 | (303) |
| 近 30 年来中国农村居民食物消费的生态足迹分析 陈冬冬 | |
| 农民专业合作组织可持续发展初探 | (327) |
| 农业科技期刊 | |
| 我国畜牧动物医学类期刊现状与发展对策研究 | (335) |
| 科技期刊编辑中常见语病的分析 | (344) |
| 我国市场分析类农业期刊发展的 SWOT 分析 | (348) |

| 科技期刊国际化有关问题的再思考 张以民 (| |
|--------------------------------------|-------|
| 从数据看《农业图书情报学刊》发展历程及未来前景 | (359) |
| 附录 | |
| | |
| 一、中国农业科学院农业信息研究所 2010 年主要在研项目 | (366) |
| 二、中国农业科学院农业信息研究所科研人员 2010 年度出版的著作及译著 | (369) |
| 三、中国农业科学院农业信息研究所 2010 年年度鉴定的科研成果 | (372) |
| 四、中国农业科学院农业信息研究所 2010 年登记注册的软件著作权 (| (373) |
| 五、中国农业科学院农业信息研究所 2010 年新型实用专利权 | (375) |
| 六、中国农业科学院农业信息研究所 2010 年大事记 (| (376) |
| 七、中国农业科学院农业信息研究所组织机构和各部门负责人名单 | (384) |

Contents

Foreword

Strategy for IT Application in Agriculture

| 3G Communications and Rural Information | |
|---|-------|
| Construction Shao Changlei, et al. | (3) |
| Analysis of Basic Construction Countermeasures Based on | |
| First-class Institute Objectives | |
| Liu L | i (8) |
| Exploit the Advantages and Promote the Innovation and | |
| Development of the Agricultural Sci-tech Information | |
| Branch of the China Agricultural Society Chen Yizhong | (15) |
| | |
| Agricultural Information Technology | |
| Design of Agent-based Bee Product Quality | |
| Control System Zhu Yeping, et al. | (27) |
| Using STL Simulate the DataSet of ADO. NET Based on | |
| VC++ Non-hosted Mode Fan Jingchao, et al. | (41) |
| Evaluation of Digital Maize Planting and Management System | |
| Based on Simulation Model Li Shijuan, et al. | (45) |
| Design and Implementation of Quality Traceable Label for Cereal and | |
| Oil Products Based on UCC/EAN - 128 Bar Code Zheng Huoguo, et al. | (53) |
| Study on Agricultural Scientific and Technical Information Core | |
| Metadata (ASTICM) Standard and Indexing System Cui Yunpeng, et al. | (60) |
| An Architecture for the Agricultural Machinery Intelligent Scheduling | |
| in Cross-regional Work Based on Cloud Computing | |
| and Internet of Things Sun Zhiguo, et al. | (67) |
| Research on 3G Technologies-based Agricultural Information | |
| Resource Integration and Service Xie Nengfu, et al. | (76) |

| · · · · · · · · · · · · · · · · · · · |
|--|
| Design and Realization of the ZH/EN Bilingual Retrieval |
| System Based on the CAT/AGROVOC Mapping Sun Wei, et al. (84) |
| Agricultural Information Resources Management |
| Construction of Personalized Information Environment for |
| Scientific Research Team |
| Solid Footprint—Record on the Development of NSTL |
| Network Reference and Consultant Service Pi Jiezheng (106) |
| Quality Control of Foreign Literature Data Processing Li Di (113) |
| Study on Needs and Guarantee of Foreign Documents by |
| Agricultural Researchers Based on Citation Analysis Xu Yuhong, et al. (118) |
| Information Service Models of Overseas Libraries and |
| Its Enlightenment Wang Yuqin, et al. (126) |
| Comparative Analysis of Aleph500 and GdlisNet Yang Haiyan (133) |
| Status of E-Document Resources Construction and Its Development |
| Strategy of Chinese Academy of Agricultural Sciences Wang Ting, et al. (140) |
| Design and Implementation of China's Post-graduate Education |
| Dynamic Database Platform of Agriculture and |
| Forestry Subjects Kou Yuantao, et al. (147) |
| Perfecting NSTL Information Service and Providing Satisfactory |
| Service for Users Wang Jingjing, et al. (156) |
| Study and Practice of Automatic Split of NSTL Periodical |
| Citation Data Xian Guojian, et al. (162) |
| Problems of Digital Resources Long-tern Preservation Liu Minjuan (171) |
| Analysis and Thoughts Oriented to Accelerating Budget |
| Executive Progress Liu Li (176) |
| Agricultural Information Analysis |
| |
| Analysis of Food Safety Burst Effect |
| Empirical Study on the Price Transmission of Agricultural |
| Products between Production and Marketing in China Xu Shiwei, et al. (198) |
| Current Situation of Food Security and Policies in China Nie Fengying (210) |

Measurement and Analysis of Price Risk for

| Livestock in China Zhang Qiao, et al. (220) |
|--|
| Measurement of the Fluctuation Risk of the China |
| Fruit Market Price Based on VaR |
| Short-term Market Price Transmission Mechanism of Egg |
| Industry Chain in China Li Zhemin, et al. (238) |
| Comparative Study on the Preference of Public Project |
| Investment Orientation of Villagers from Villages |
| of Different Characteristics |
| Study on Super Short-term Forecasting for Market Price of Agro-products |
| ——Modeling of Daily Wholesale Price of Tomatoes Based |
| on Modern Times Series Li Gangiong, et al. (263) |
| Thoughts from the Rapid Rising of Garlic Price Li Huishang (273) |
| Analysis of Milk Market in 2009 and Outlook for 2010 Liu Zijie, et al. (279) |
| Brief Introduction of Correlative Experimental Study in |
| Heredity for Chinese Deer Lu Wenlin, et al. (290) |
| Influence of Flexible Crop Yield Distributions on Crop Insurance |
| Premium Rate: A Case Study on Cotton Insurance in Three |
| Counties, Xinjiang Uygur Autonomous Region Wang Ke, et al. (303) |
| Ecological Footprint Analysis of Food Consumption of Chinese |
| Rural Households in the Latest 30 Years Chen Dongdong (313) |
| Preliminary Study on the Sustainable Development of |
| Farmers' Special Cooperatives Guo Yanzhi (327) |
| |
| Agricultural Science and Technology Periodicals |
| Study on the Status and Development Countermeasures of Periodicals |
| in Animal Science and Veterinary Medicine in China Zhao Yingbo (335) |
| Analysis of Common Incorrect Sentences in Scientific |
| Journal Editing Sun Guofeng (344) |
| SWOT Analysis of the Development of China's Market Analyze |
| Agricultural Journals |
| Rethinking on Internationalization of Chinese Scientific |
| Journals Zhang Yimin (353) |
| View the Development of Journal of Library and Information Sciences |

| in A | Agriculture | via ' | the Data | from | 2001 | to | 2007 | | Kong | Yehan | (359) |
|------|-------------|-------|----------|------|------|----|------|--|------|-------|-------|
|------|-------------|-------|----------|------|------|----|------|--|------|-------|-------|

Appendixes

| Ι. | Major on-going research projects of the Agricultural Information | | | | | |
|-------------------------|---|-------|--|--|--|--|
| | Institute, Chinese Academy of Agricultural Sciences in 2010 | (366) | | | | |
| ${\rm I\hspace{1em}I}.$ | Works translated and published by the research staff of the | | | | | |
| | Agricultural Information Institute, Chinese Academy of | | | | | |
| | Agricultural Sciences in 2010 | (369) | | | | |
| | Prized research achievements of the Agricultural Information | | | | | |
| | Institute, Chinese Academy of Agricultural Sciences in 2010 | (372) | | | | |
| IV. | Registered software copyright of the Agricultural Information | | | | | |
| | Institute, Chinese Academy of Agricultural Sciences in 2010 | (373) | | | | |
| V. | Patents of utility model of the Agricultural Information Institute, | | | | | |
| | Chinese Academy of Agricultural Sciences in 2010 | (375) | | | | |
| VI. | Chronicle of events of the Agricultural Information Institute, | | | | | |
| | Chinese Academy of Agricultural Sciences in 2010 | (376) | | | | |
| Մ. | Institutional organization and division responsible people of | | | | | |
| | the Agricultural Information Institute, Chinese Academy of | | | | | |
| | Agricultural Sciences | (384) | | | | |

农业信息化战略

Strategy for IT Application in Agriculture

- ◆ 3G 通信与农村信息化建设
- ◆ 基于一流研究所目标的基础条件建设对策分析
- ◆ 发挥学会优势 促进农业科技情报学会的创新与发展