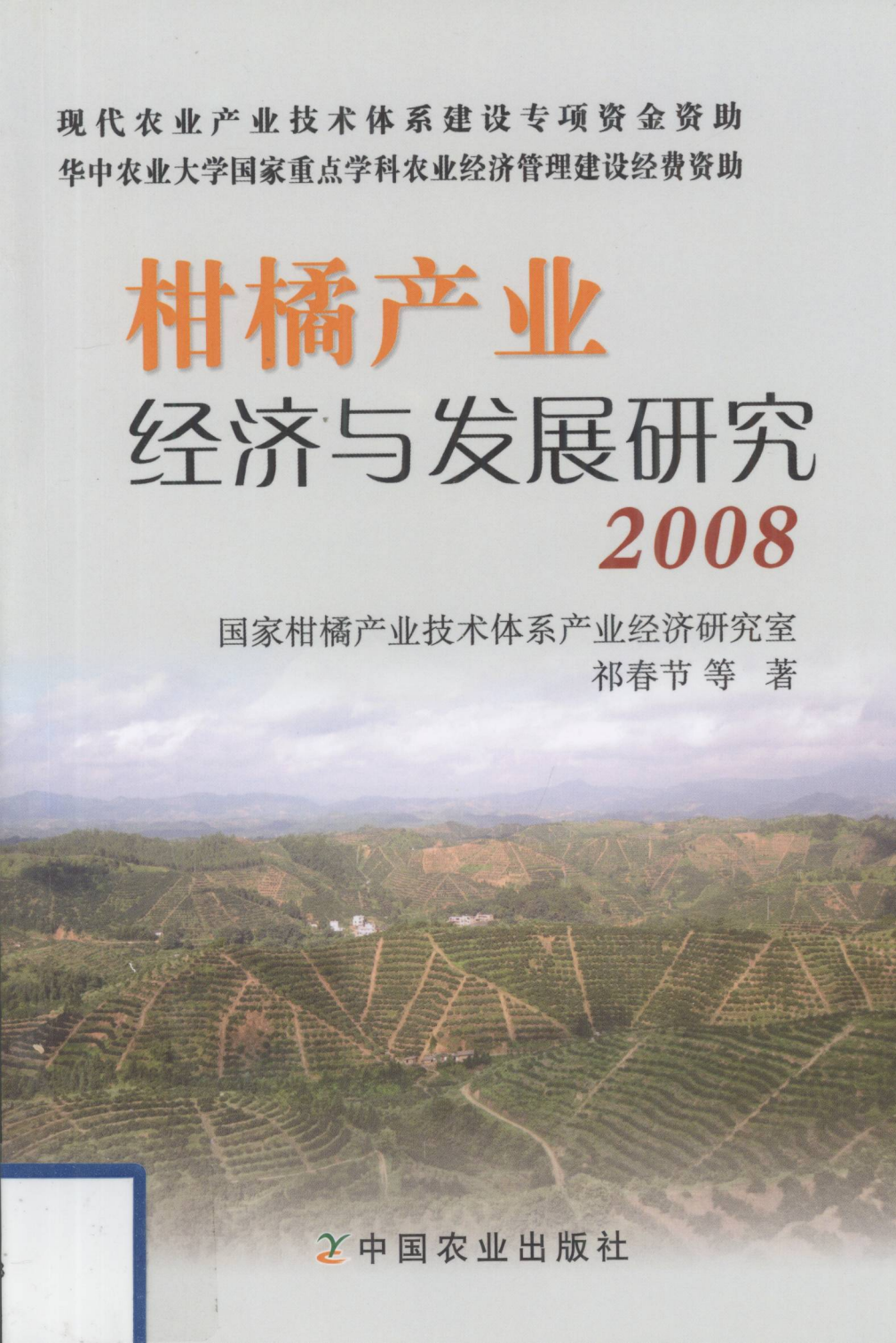



现代农业产业技术体系建设专项资金资助
华中农业大学国家重点学科农业经济管理建设经费资助

柑橘产业 经济与发展研究 2008

国家柑橘产业技术体系产业经济研究室
祁春节等 著



 中国农业出版社

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前 言

2007 年底农业部和财政部联合启动了现代农业产业技术体系建设试点工作，先期选择了水稻、玉米、小麦、大豆、油菜、棉花、柑橘、苹果、生猪、奶牛 10 个农产品开展试点工作，标志着国家农业科技创新体系建设取得实质性突破。并且，在一个独立的农产品及产业技术体系里设立一个产业经济研究岗位，是我国科学研究工作中的一项创举，这在我国是破天荒的大事。

国家柑橘产业技术体系建设既是一个技术课题，也是一个经济课题。柑橘产业经济研究岗位的主要目标任务是，对我国柑橘产业发展过程中产前、产中和产后三个领域面临的突出问题进行经济学、管理学研究，建立起较为完整的经济及政策研究体系和经济信息服务体系，为政府部门提供决策咨询服务，为产业发展提供技术咨询和信息服务，为产业中各用户提供经营管理和信息服务。

《柑橘产业经济与发展研究 2008》是国家柑橘产业技术体系产业经济研究室的学术论文和报告研究的选集，它只反映了柑橘产业经济研究室年度科研成果的一个侧面。我们打算自 2008 年开始，拟每年出版一本。

本书共收集了 22 篇由柑橘产业经济研究室研究人员在 2008 年度完成的部分论文和研究报告。这些论文和报告按研究内容可分成五个部分：技术经济；消费、流通与市场；对外贸易；国际贸易；产业宏观经济与政策。将这些论文和报告结集出版，呈现在产业界、学术界同行面前，期望能够引起大家的进一步讨论和深入研究，对我国柑橘产业可持续发展起到一定的推动作用。

感谢农业部科技教育司刘艳副司长、产业技术处张国良处长、徐利群副处长，农业部办公厅王小兵副巡视员，种植业司叶贞琴司长、马淑萍副司长、周普国副巡视员、蔡派处长、经作处王戈处长、龙熹副处长及全国农技推广中心经作处李莉副处长等给予的指导、支持和帮助！感谢华中农业大学科技处、经济管理—土地管理学院的领导和同事给予的关心和支持！

特别感谢国家柑橘产业技术体系首席科学家、华中农业大学校长邓秀新院士长期给予的关怀、指导！感谢产业技术体系内执行专家组、各岗位科学家、各综合试验站站长对产业经济研究室的支持和帮助！

感谢现代农业产业技术体系建设专项资金资助以及华中农业大学国家重点学科农业经济管理建设经费资助。

最后还要感谢中国农业出版社颜景辰等为本书出版提供了无私的帮助。我们选编的论文或研究报告只代表了作者的观点和结论，由于视野不宽和研究水平有限，书中难免存在错漏，恳请同行专家、学者以及广大读者不吝赐教，提出批评与建议。

国家柑橘产业技术体系产业经济研究室主任
华中农业大学园艺经济研究所所长 祁春节

2009年5月

Preface

At the end of 2007, Chinese Ministry of Agriculture and Ministry of Finance started the pilot work of developing the modern agri-industry technology system jointly. Rice, corn, wheat, soybean, rape, cotton, citrus, apple, live pig, cow are selected to initiate the pilot project, which is a breakthrough in the construction of the national agriculture scientific innovation system. Setting up an industrial economic research position for each independent agricultural product in the industrial technology system is a pioneering work of Chinese scientific effort, which is unprecedented in our country.

The construction of National Citrus Industry Technology Research System is both a technical and economical topic. The main task of economic study position on citrus industry is to carry on economic and management study on the prominent problems in the former, middle and latter period of our country citrus fruits industrial development process; to establish a relatively completed economy and policy research system and information services structure; to provides decision-making advisory service for the Government; to provides technical advisory and information service for the industrial development, to provide management and information service for various users in the industry.

Researches on Economy and Development of Citrus Indus-

try is the academic selections of 22 articles and reports written in 2008 by staff of Research Center of Citrus Industrial Economics, National Citrus Industry Technology Research System, which is expected to be published annually since 2008. Five topics are included, namely, technical economy; consumption, circulation and market; foreign trade; and industrial macroeconomy and policy.

To be exact, articles and reports in this book are listed as follows: Zeng Guang et al. An Analysis of Economic Benefit of Citrus Bed-Planting—Based on Empirical Demonstration of Danyang; Song Jintian et al. The Evaluation and Analysis of China Farmer Household's Productivity—Taking Citrus Farmer for Instance; Wang Xiaoyin et al. The Measurement and Analysis of the Contribution Ratio of Science and Technology Progress of Chinese Citrus; Li Zhiping et al. Do Citrus Growers Benefit from Participating in Cooperatives? Evidence from China; Deng Junrong et al. Analysis of Farmer's Actuality in Citrus Fruit Supply Chain in China; Wang Baisen. ARIMA Time Series Modeling and Applying on Citrus Fruit; He Jin et al. Empirical Research on Product Cost and Market Price of Orange in China; Sun Lei et al. The Analysis of Value Chain and Circulation Efficiency of Agricultural Products—Based on the Zigui Orange Circulation Market Research; Ma Qiang et al. An Empirical Study of the Consumer Expectations of the Standardization Management Based on the "Orange Maggot Door"; Liu Shuang et al. Empirical Study on the Mobilephone Message Matter about *Bactrocera Minax*, Consumer Mentality and Consumer Behavior; Li

Zhiping et al. Why Citrus Consumers Escape from Market? Deng Junrong et al. Thought to the Construction of Agri-Food Supply Chain Based on the Food Safety—Take Citrus as Example. Liu Ying et al. The Analysis of Current Situation of Citrus Export and Faced International Environment of China; Qin Zhen et al. The Analysis of Competitiveness of China's Citrus and Processed Products; Zhao Yu et al. A Study on the Interaction between Chinese Export Price and World Import Price of Tangerines; Qi Chunjie et al. Changes in Chinese Citrus Import and Export Pattern and Efficiency after the Accession to WTO; Wang Yanli et al. Analysis on Geographical Flows of China's Exports of Fresh Citrus Fruits and Trade Competitiveness; Qi Chunjie et al. Development and Change of Citrus Industry of China in Recent 30 Years since Reform and Opening ; Qi Chunjie et al. The Assessment Report of Snow Damage and Frozen Injury to China Citrus Industry of 2008; Zhang Shengyong et al. The Analysis and Solution of Slow Sale of Citrus in China 2007; Xiong Wei et al. Construction of Early Warning Index System of Citrus Market in China; Qi Chunjie et al. The Analysis of Citrus Supply and Demand of China in 2008.

These articles and reports are selected to be published to serve for the primary purpose of the attracting the attention of colleagues to these topics and deepen these researches, which will maintain the sustainable development of Chinese citrus industry.

I would like to express my warmest gratitude to those who give instruction, support and assistant to the publication of this

book. Namely, Liu Yan, deputy chief of Department of Science and Technology Education of Ministry of Agriculture; Zhang Guoliang, section chief of Industrial Technology Department; Xu Liqun, vice director of Industrial Technology Department; Wang Xiaobing, vice inspector of General Office of Ministry of Agriculture; Ye Zhenqin, chief of Department of Crop Cultivation; Ma Shuping, deputy chief of Department of Crop Cultivation; Zhou Jinguo, vice inspector of Bureau of Crop Production Administration; Cai Pai, section chief of Department of Crop Cultivation; Wang Ge, section chief of Economic Co-operation Office; Long Jia, vice director of Economic Co-operation Office; Li li, vice director of Economic Co-operation Office of National Agricultural Technology Extension Center. At the same time, I am also grateful to leaders and colleagues in Science and Technology Department and School of Economic and Land Administration of Huazhong Agricultural University, for their concern and support.

Besides, we should specially appreciate the help and support from Deng Xiuxin, the academician of Chinese Academy of Engineering, chief scientist of National Citrus Industry Technology Research System and the President of Huazhong Agricultural University. Special appreciation also goes to expert group and related scientists and station masters of the system.

Thanks to earmarked fund for Modern Agro-industry Technology Research System construction and construction fund for national key discipline—Management of Agricultural Economy of Huazhong Agriculture University.

Finally, thanks to the help from editors of Chinese Agricultural Press, such as Yan Jingchen, etc.. The selected articles and reports in the book only represent personal views. The knowledge and studies could be limited, so if there would be any error in this book, do not hesitate to give us your comment and suggestions.

Qi Chunjie

Director

Reasearch Center of Citrus Industrial Economics, National Citrus Industry Technology Research System; Institute of Horticultural Economics, Huazhong Agricultural University.

May 2009

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柑橘起垄栽培技术的经济效益评价 ——基于当阳的实证分析

Economic Benefit Evaluation of Citrus Bed-Planting—Based on Empirical Analysis of Dangyang

曾 光 祁春节

Zeng Guang Qi Chunjie

摘 要 文章以湖北省当阳市推行起垄栽培新技术种植柑橘的橘农及柑橘实验站为调研对象,在通过实地调研取得大量第一手资料的基础上,运用农业技术经济等现代分析方法,分别从柑橘起垄栽培技术的增产、增收效果,起垄栽培的经济效益评价,以及起垄栽培单产增量的经济临界限测算等角度,对柑橘种植起垄栽培技术进行了全方位的经济效益分析。研究结果表明,该新技术的增产增收幅度较大,经济效益十分明显,其实际单产量也远远超过了增量的经济临界限。

关键词 柑橘;起垄栽培技术;增产效益;经济临界限。

Abstract The essay took citrus farmers and citrus experiment station of Dangyang in Hubei province who adopted the new Bed-Planting technology as research objects. Based on a lot of first-hand data from the practical research, we applied agricultural technology economics and other modern analysis methods to analyz the multi-level economic benefit of citrus Bed-Planting

technology from the views of its effects on yield and income increase, the evaluation of its economic benefit and the economic critical point of its yield increments. The results demonstrated that yield and income highly increased by adopting the new technology. Its economic benefit was obvious and its yield was far more than the economic critical point of increments.

Key words citrus; bed-planting technology; yield increasing effect; economic critical point.

采用起垄栽培技术种植柑橘是近年来国内部分地区采用的一项先进的农业栽培技术,该技术通过对橘园土地平整,采用抽槽和回填等工序在橘园建起垄栽培畦,然后在垄畦上种植柑橘苗。采用该技术,能够在橘园的后期的管理,如土地耕作、施肥、树体管理和排灌等方面给橘农带来很大的劳动力节约。而且,更为重要的是,由于起垄栽培后橘树的防水效果更好,其柑橘果质更优,产量也更高。总的来说,实行该新技术的管理成本和增收效果十分明显。但是,相对于管理成本的减少和果质的提高,采用该新技术也会相应地增加诸如建园、学习新技术等成本。因此,柑橘起垄栽培技术的增收效应能否超过其增加的成本,该技术的大面积推行在经济上是否有利,经济效益有多高等问题都有待进一步地论证。

有鉴如此,本文将在对湖北省当阳市部分实行柑橘起垄栽培技术的橘农进行实地调研的基础上,运用大量的第一手微观数据资料,对柑橘起垄栽培新技术进行全面的经济分析,测算新技术的新增经济效益,确定新技术比常规方法种植柑橘在单位面积产量增量上的经济临界点,以期确定该技术的应用前景,促进柑橘起垄栽培新技术的全面、迅速推广。

一、数据来源及处理

2008年6月期间,本调研小组对当阳市王店镇、半月镇、