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苏新宏•著

稳定性问 题研究

河南省烤烟生产发展 稳定性问题研究

Study on the Stability of Flue-cured Tobacco Production Development in Henan Province

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序言

《河南省烤烟生产发展稳定性问题研究》一书出版之际,作者邀我作序,作为本书作者的博士生导师,我责无旁贷,欣然接受。苏新宏是我的第一个博士生,他于2006年考入河南农业大学攻读博士学位,几年来,我目睹了他在烟草技术经济领域的不懈追求和成长过程,他农学硕士毕业后进入河南省烟草专卖局(公司)工作,主要从事烤烟生产经营管理工作,倍感农业经济管理知识的匮乏,2006年适逢河南农业大学经济与管理学院招收第一届博士生,他有幸成为该院当年唯一一名博士生。由于工作繁忙,而且是从学习作物生产技术转向农业经济管理,在指导他学习、选题和撰写论文的过程中,使我看到了他有志于将农业经济管理理论和烤烟生产相结合的迫切愿望,并为此不懈追求,与此同时,也加深了我对烟草行业、对河南省烤烟生产的了解。在苏新宏博士的学术专著即将出版之际,谨向他表示由衷的祝贺!

烟草产业是我国的重要产业,在增加国家财政收入和发展地方经济中发挥着重要作用,同时烟草产业也是一个特殊的产业,目前实行国家垄断、专卖专营。烟叶作为烟草产业供应链的起始点,在整个产业中处于重要的基础地位,其产量与质量稳定与否,不仅关系到整个烟草产业经济运行的平稳发展和经济运行质量的提高,同时事关国家烟草产业的安全。国家烟草专卖局姜成康局长指出,烟叶是行业发展的基础,也是制约行业发展的因素,烟叶工作的好坏事关全行业发展的大局;烟叶稳,整个行业就稳;烟叶出问题,整个行业必然出问题。随着《烟草控制框架公约》生效、农业大环境的变化、卷烟产品结构的调整、烟草行业体制改革的深化以及品牌扩张战略的实施,烟叶生产平稳发展的不确定因素增多,对我国烟草行业产生深远的影响。

河南省是我国烤烟发源地之一,1913年开始试种烤烟,已有近百年种植历史,是我国的老烟区,过去很长时间是我国烤烟的主产区之一。河南烟叶具有独特的浓香型风格特色,配伍性好,在过去很长一段时间内支撑着我国卷烟工业的发展,为行业发展做出了巨大贡献。1987年之前河南省烤烟收购量稳居全国第一,之后整体呈下降趋势,尤其是1998年后收购量大幅下降,生产波动较大,2007年创历年来最低,在全国的位次逐步后移,不能满足一些把

河南烟叶作为主料原料工业企业卷烟生产的需要。随着国家烟草专卖局"中式卷烟"的提出、"两个10多个"战略以及卷烟上水平规划的实施,行业发展已经进入了新的阶段,优势卷烟企业和优势卷烟品牌迅速扩张,对河南浓香型烟叶的需求有一定程度的增加,而烟草行业工商管理体制分离后实施的工业烟叶采购计划与商业烟叶生产计划相等政策,对烟叶生产销售计划进行严格管制,以及烟叶资源配置方式改革(烟叶生产计划由工业需求来确定),对河南烟叶发展提出了不小的挑战。研究河南省烤烟生产稳定性问题,对持续满足卷烟工业企业优势品牌对河南烟叶的需求,实现河南省烤烟生产的稳定发展具有重要意义。

本书针对河南省烤烟生产发展实际,运用理论分析与实证分析相结合,定量分析与定性分析相结合的方法,从理论到实证,从宏观到微观,通过研究背景介绍、国内外研究动态与主要理论基础概述,对专卖管理体制下河南省烤烟供给与需求进行了分析,运用生产波动理论对河南省烤烟生产波动问题进行了实证分析,还运用比较优势理论和竞争优势理论对河南省烤烟生产区位移动及生产布局调整进行了实证分析,运用数据包络分析方法(DEA)对河南省烤烟生产技术效率进行了评价,并通过问卷调查的方式对河南省烟农种植意愿进行了实证分析。从供需状况、生产波动、布局调整、比较效益、技术效率、生产者行为、政策环境等方面分析了影响河南省烤烟生产发展稳定性的制约因素,并据此提出实现河南省烤烟生产稳定发展的政策建议。研究成果具有一定的制力之处,对策建议具有一定的操作性。希望本书的出版能为河南省乃至全国烤烟生产提供借鉴和参考。

是为序。

张冬平 2011年4月于河南农业大学

摘 要

烟叶作为烟草产业供应链的起始点,在整个产业中处于重要的基础地位。河南省是我国烤烟主产区之一,所产烟叶具有独特的浓香型风格特色、配伍性好,在国内卷烟配方中发挥着重要作用。1998年后河南省烤烟收购量大幅下降,生产波动较大,在全国的位次后移,不能满足卷烟生产需要,尤其是在国家烟草专卖局(简称国家局)提出卷烟大品牌战略后表现更为突出。研究河南省烤烟生产发展稳定性问题,对持续满足卷烟工业企业优势品牌扩张对河南烟叶的需求,实现河南省烤烟生产的稳定发展具有重要意义。

本书基于经济学相关理论,在总结已有研究成果,吸取其中有益的理论分析和论证方法的基础上,针对河南省烤烟生产发展实际,系统深入地分析了影响河南省烤烟生产稳定发展的障碍性因素,揭示了相关因素对烤烟生产发展影响效应及存在问题,为河南省烤烟生产稳定发展提供思路和对策。本书的主要结论和创新成果如下:

- 1. 分析了我国及河南省烤烟供给与需求状况。结果表明,烟叶作为一种自然属性与经济属性相互交织的农产品,生产受自然、经济、社会、政府管制等多种因素影响,需求弹性与供给弹性差别很大,供给的调整总是相对滞后于需求的变化,烟叶生产的周期性波动和烟叶市场的供需失衡难以完全避免,尤其是烤烟收购的完全买方政府垄断和烟农自由种植之间的矛盾越来越突出。河南省烤烟生产和全国烤烟生产一样,每年都面临着"稳与控"、"多与少"的压力,国家局中式卷烟的提出以及我国加入《烟草控制框架公约》对减害降焦的新要求,给河南省烤烟生产发展带来了机遇。河南省烤烟生产应把有限的烤烟种植计划用足、做实,稳定种植面积,在保持河南省烤烟浓香型风格特色的基础上,提高单位面积产量,避免产量出现大的波动,并根据市场需求状况,不断向国家局争取种植收购计划,力争规模稳定在17.5万~20万吨,占我国烤烟市场份额稳定在8%以上,提高特色优质烟叶的保障能力。
- 2. 对河南省烤烟生产波动进行了实证分析。结果表明,在 1988 年之前河南省和全国烤烟生产波动基本一致,大部分年份占全国总量的 20%以上,年收购量均在 35 万吨以上,1988 年之后河南省烤烟生产总体呈下降趋势。建立

烟草专卖体制后的 1983—1992 年是豫中烟区发展最好的时期,占全省总量一直保持在 30%以上,之后逐渐被豫西烟区代替。HP 滤波法测定烤烟生产波动表明,河南省烤烟产量以 1986 年为分界点明显分为上升和下降两个大阶段,2005 年后又开始缓慢平稳向上。根据周期波动理论,可以将河南省 1950—2009 年烤烟生产波动划分为 12 个阶段,波动的平均年距为 4.75 年,烟草管理体制的建立并没有抑制烤烟生产稳定性差的状况。进一步分析显示,种植面积 2003—2009 年呈缓慢平滑向下,而单产 1999—2009 年呈较快平滑上升,种植面积进一步恢复的难度较大。影响河南省烤烟产量波动最主要的因素是种植面积、物质投入(正效应),其次是自然灾害(负效应),其他因素影响较小。

- 3. 对河南省烤烟生产布局调整及区位移动进行了分析。结果表明,不管是与其他产烟省份相比,还是在省内与其他竞争作物相比,河南省烤烟生产都具有较强的综合比较优势,但从近十年的发展趋势看比较优势正在不断丧失,预高的综合比较优势有待加强。河南烤烟生产的效率比较优势不明显,较高的综合比较优势主要靠规模优势来维持,发挥河南烤烟生产综合比较优势必须依靠省内烤烟生产布局调整和提高效率比较优势。河南省烤烟生产优势具有显著的地域差异,生产的优势区主要分布在豫西烟区的三门峡、洛阳和济源,豫中烟区的平顶山、许昌和漯河以及豫西南烟区的南阳;豫中、豫东烟区效率比较优势高于规模比较优势,而豫西、豫西南烟区则相反。规模比较优势高的地区要以提高土地生产率为主,而效率比较优势高的地区要以提高烟叶质量为主。从烤烟产区移动的状况看,生产重点区域呈现由平原向丘陵山区、东部向中西部、经济发达地区向经济欠发达地区转移的趋势。
- 4. 对河南省烤烟生产比较效益与生产效率进行了分析。结果表明,河南省烤烟单位面积产量、出售价格、生产成本较低,净利润、现金收益、成本利润率较高;河南省平原烟区单产较高、生产成本较低、净利润较高,而部分丘陵烟区具有价格优势,加上适度补贴和较高单产,净利润也较高,如果丘陵山区单产过低,即便有价格优势和较高补贴,净利润仍较低。烤烟单作或小麦/烤烟与其他作物复种方式相比,总成本、产值、现金成本、现金收益高,但净利润、成本利润率低,主要原因是河南烤烟生产以家庭劳动力为主进行生产,用工数量多,家庭劳动日工价被明显低估。对河南省烤烟生产效率分析可知,与全国其他主要产烟省份相比,目前河南省烤烟生产的综合技术效率、技术效率与规模效率均处于无效率状态,生产还处于规模报酬递增阶段。基于Malmquist 指数的生产效率分析表明,1983 年以来,河南省烤烟生产的全要素生产率 TFP、技术进步、综合技术效率、纯技术效率与规模效率变化都呈

现明显的下降趋势,且年际间波动较大,主要是受技术进步缓慢和规模效率不高的影响。

- 5. 分析了河南省烟农烤烟种植意愿和影响因素。结果表明,烟区多数烟 农年龄在50岁左右,文化程度以初中文化为主,烤烟牛产仍然是以"小农牛 产、分散种植、粗放经营"为主的传统农业生产方式,户均种植规模主要集中 在 0.27~0.67 公顷,烟农在长期的实践中对种植技术比较熟悉,烤烟种植收 入比较稳定。烤烟种植劳动用工多、强度大、比较效益不高、病虫害多和机会 成本高是阻碍烟农种烟的主要原因,影响烟农种烟积极性主要是管理问题而不 是技术本身。烟农对病虫害防治技术和测土配方施肥技术需求迫切,希望得到 生产资料补贴;烟农希望烟草部门加大生产投入,继续做好技术指导和服务。 ISM 模型分析表明,影响烤烟生产稳定发展的因素链中,直接因素是种植技 术、烟农种植意愿、种烟收入、管理服务等;基础因素是烟农文化程度和烟田 轮作制度。对烟农种植意愿影响因素的实证分析表明,烟农年龄、所处地貌、 种烟劳动力人数、种烟烟龄、种烟收入占全部收入的比例、是否进行轮作、对 烟草公司技术服务满意度、参加烟叶种植保险意愿、烟叶收购站的服务等因素 都会对烟农种烟的意愿和积极性产生正的影响,烟田基础设施和密集烤房等基 础设施建设虽然不能起到激励作用,但作为保健因素在稳定烟农种烟积极性方 面不可或缺。
- 6. 对河南省烤烟生产的外部政策环境和要素投入进行了分析。结果表明,种烟比较效益下降,市场需求萎缩和国家局政策取向加剧了北烟南移步伐。烤烟种植面积和单产是影响河南省烤烟生产变化相对活跃的因素,城镇化对烤烟生产有一定程度的负向影响,工业化对带动烤烟生产发展的促进作用有待进一步加强,烤烟生产支持政策还需要进一步强化。农村土地经营制度是导致烤烟"小而散"种植方式的根本原因,2004年以来中央的农业新政为烤烟生产稳定发展带来了机遇与挑战。与其他种烟省份相比,河南省烤烟生产要保持资金生产率较高的前提下,不断提高土地生产率和劳动生产率;与其他烤烟竞争作物相比,烤烟生产单位面积产值的提高主要靠价格上涨实现,1983年以来烤烟生产土地、资金生产率增长幅度和劳动生产率下降幅度远不及其他竞争作物。河南烤烟生产还缺乏关键技术支撑,尤其是缺乏优质、适产、抗逆性好的当家品种和先进的生产工具,稳控矛盾仍然困扰河南省烤烟生产发展。
- 7. 提出了实现河南省烤烟生产稳定发展的对策建议。在理论分析与实证研究结论的基础上,针对河南省烤烟生产现状,在分析影响因素作用机制的基础上,提出了农工商研牵手,加快品牌导向性基地单元建设;大力推进现代烟

草农业建设;创新烤烟生产组织管理模式;加快河南省烤烟种植向优势产区转移和调整种植结构;完善河南省烤烟生产科技支撑体系;提高农民种植烤烟的比较效益,促进烟区农民增收;建立和完善烟叶生产扶持政策等一系列对策建议。

关键词:河南省;烤烟生产;稳定性;专卖体制

Abstract

Tobacco leaf as a starting point for the tobacco industry supply chain, is an important foundation in the whole tobacco industry. Henan province is one of the main producing areas of China; Henan tobacco leaf has a unique aromatype tobacco flavor trait and good compatibility, which play an important role in the domestic cigarette blends. After 1998, Henan provincial flue-cured tobacco displayed a sharp decline in purchase amounts and enormous production fluctuation, resulting in backward order of precedence in the domestic and insufficient needs of cigarette production; highlighted in the big brand strategy proposed by state tobacco monopoly bureau. Studying on some problems influencing the stability of flue-cured tobacco production development will be great significance for sustaining demand of preponderant cigarette brands of industrial enterprises and stable development of flue-cured tobacco production in Henan province.

Based on the theory of economics, reported research results summarized, and useful theoretical analysis and verification methods, this dissertation systematically and deeply analyzed obstacle factors influencing the stability of flue-cured tobacco production development, and revealed influencing effects-related factors and existing problems, aiming at current status of flue-cured tobacco production in Henan province. This study will provide useful ideas and measures for stable development of flue-cured tobacco production in Henan province. The main conclusions and innovations are as follows:

1. Analysis of flue-cured tobacco supply and demand conditions in Henan province and in China. The results show that tobacco leaf as an agricultural product intertwined with natural property and economic attributes, is influenced by natural, economic, social, government regulation and other factors; its demand and supply elasticity exists large difference, and the adjustment of its supply always lags behind the demand changes. The resulting cyclical fluc-

tuations of tobacco leaf production and imbalance of products market supply and demand are not avoided completely, especially, more and more prominent contradictions between complete government monopoly of flue-cured tobacco purchase and free planting of growers. Like flue-cured tobacco production nationwide, flue-cured tobacco production in Henan province faces pressure of "stability and control", "more and less" each year. The concept "Chinese-cigarettes" proposed by the state tobacco monopoly bureau and new requirements of harm-reduction and reducing tar from China's accession to "the Framework Convention on Tobacco Control" bring opportunity to flue-cured tobacco production development in Henan province. Henan flue-cured tobacco production should be of limited use to the full planting plans, and practical, stability, growing area, while maintaining the unique style of Henan tobacco aroma-type flavor, based on increased yield per unit area, to avoid big fluctuations in output; According to market demand situation, the Henan flue-cured tobacco production should constantly strive for increasing planting and purchase program to the state tobacco monopoly bureau, and attempt to scale stable at 17.5-20 million tons, accounting for more than 8% of domestic flue-cured tobacco market share, and improve security capacity of characteristic and high-quality tobacco leaf.

2. Empirical analysis of the fluctuation of the Henan flue-cured tobacco production. The results show that the volatility of flue-cured tobacco production in Henan province is similar to that of the nation prior to 1988; In most of years the yield accounted for more than 20% of national total amounts and annual purchase amount exceeds more than 35 million tons; after 1988, Henan province has overall downward trend in tobacco production. The best period of flue-cured tobacco development in central Henan province was from 1983 to 1992 after the establishment of tobacco monopoly system in Henan province, accounting for and remaining more than 30% of the whole province's total. After that, its position was gradually replaced by western Henan province tobacco areas. But flue-cured tobacco district of Western Henan province position is no longer compared with the old central Henan province. The analyses of flue-cured tobacco production fluctuations in Henan province using HP filter method showed that flue-cured tobacco production can be divided into two major rise

and fall phases as the cutoff point of 1986 and began to rise slowly and smoothly again after 2005. According to business cycle theory, flue-cured tobacco production fluctuations from 1950 to 2009 are divided into 12 stages in Henan province, fluctuations in average distance of 4.75 years; Establishment of the tobacco management system did not inhibit the situation of deteriorating stability in the production of flue-cured tobacco. Further analysis showed that planting area presents down slowly and smoothly from 2003 to 2009, and yield per unit displays a smooth rise rapidly from 1999 to 2009, planting area is difficult to further recovery. The most important factor impacting flue-cured tobacco production fluctuations in Henan province is planting area, material input (positive effect), followed by natural disasters (negative effect), and other factors were less effect.

3. Henan flue-cured tobacco production layout adjustment and mobile location were analyzed, the result shows that Henan flue-cured tobacco production has strong comprehensive comparative advantage regardless of comparing with other than flue-cured tobacco producing provinces, or other competing crops; but comparative advantage is losing from the development trend in recent decade. Overall, flue-cured tobacco production comparative advantage needs to be strengthened. The comparative advantage of the efficiency of Henan flue-cured tobacco production is not obvious, and high comparative advantage depends mainly on the scale advantage to maintain; function as a comprehensive comparative advantage of flue-cured tobacco production must rely on the production layout adjustment and improve efficient comparative advantage in Henan province. Flue-cured tobacco production has significant advantages of regional differences in Henan province; the advantages of flue-cured tobacco area are mainly distributed in western Henan Sanmenxia, Luoyang and Jiyuan, central Henan in the tobacco area Pingdingshan, Xuchang and Luohe and southwest Henan Nanyang; The efficient comparative advantage is higher than the scale comparative advantage central and eastern Henan tobacco area, while those in the western and southwest Henan tobacco area are on the contrary. Flue-cured tobacco production should give priority to improving land productivity in high scale comparative advantage areas, while improving the quality of tobacco leaf in high efficient comparative advantage areas. From the status of flue-cured tobacco producing areas, the key areas of production presented by the plains to the hills and mountains, east to central and western regions, economically developed regions to underdeveloped regions.

- 4. The comparative benefits and production efficiency of tobacco production were analyzed in Henan province, the results show that yield per unit area, the sale price, and production cost are lower; net profit, cash earnings, cost and profit margins are higher; plain flue-cured tobacco areas have higher yields, lower production costs and higher net profit, and some hilly areas have competitive price, with appropriate subsidies and higher yields per unit area, net profit was also higher; if the yield per unit area is too low in hill and mountainous area, even with the price advantage and higher subsidies, net profit is still low. Compared with other multiple cropping, tobacco monoculture or wheat/tobacco have higher total cost, production value, cash costs, cash earnings, but lower net profit, cost and profit margins; It is mainly because that flue-cured tobacco production in Henan province is based on family labors, labor quantity, underestimated family labor price of working day. Efficiency analysis shows that CRS technical efficiency, VRS technical efficiency and scale efficiency of flue-cured tobacco production in Henan province are inefficient, compared with other major flue-cured tobacco producing provinces; moreover, at present production is still in the increasing returns to scale stage. Efficiency analysis based on Malmquist index shows that total factor productivity (TFP), technical progress, CRS technical efficiency, VRS technical efficiency and scale efficiency changes of flue-cured tobacco production are showing a significant downward trend and the fluctuations between years, mainly due to slow technical progress and low scale efficiency since 1983 in Henan province.
- 5. Analysis of growers' planting willingness and influencing factors in Henan province, the results show that the age of majority of growers is mainly in the 50-year-old around in the areas, culture-based education to junior high school; tobacco production is mainly traditional agricultural production based on "small-scale production, scattered planting, and extensive management". Each household planting scale focused on 0. 27~0. 67hm², growers in the long-term practice are more familiar to planting techniques and their income is stable. The main reasons for hampering planting cultivation are more employ-

ment, hard labor, relatively low benefit, frequent diseases and pets, and high opportunity costs. Affecting the enthusiasm of growers is due to management issues rather than the technology itself. Growers need urgently diseases and pests control techniques and soil testing and fertilizer technology, and wish to get goods subsidies; growers hope tobacco sectors to increase inputs, technical services and guidance. ISM model analysis indicated that the direct factors are the growing technology, planting willingness, income, management services and other factors, and basic factors are the education and crop rotation. Empirical analysis of factors influencing planting willingness shows that factors that age, topography, labor force, planting time, income ratio, crop rotation or not, satisfaction of tobacco company's technology service, participation in planting insurance, collection stations services and other factors have positive effects on growers' planting willingness and enthusiasm in the stable development of flue-cured tobacco production chain. Field infrastructure and bulk curing barn etc. can not play incentive roles, but are indispensable as health care factors in the stability of growers' enthusiasm.

6. Analysis of external policy environment and production essential inputs of flue-cured tobacco in Henan province, the result shows that relative benefit declined, and market demand shrieked, state tobacco monopoly bureau policy orientation, intensified the planting areas from the north to the southward. Flue-cured tobacco planting areas and yield per unit area are relatively active factors affecting tobacco production in Henan province; urbanization factor produced negative impact to some extent; industrialization pulling the development of flue-cured tobacco production needs to be further strengthened, and support policies need to be further reinforced. Rural land management system is primary cause of "small and scattered" planting pattern, and the central new agricultural policy brings opportunities and challenges for the stable development of tobacco production since 2004. Compared with other planting provinces, flue-cured tobacco production should maintain the premise of high capital productivity and improve land productivity and labor productivity in Henan province; Compared with other competitive crops, flue-cured tobacco production output value per unit area is mainly achieved depending on the price increase; The growth amplitude of land and capital productivity and the decline amplitude of labor productivity of flue-cured tobacco production are far less than other competitive crops since 1983. Henan flue-cured tobacco production is also a lack of key technical support, especially of prior varieties with high quality, suitable yield, and stress tolerance and advanced production tools. Stability and control conflicts still plague the development of tobacco production in Henan province.

7. Raising countermeasures and suggestions for achieving stability and development of flue-cured tobacco production in Henan province. On the basis of previous theoretical analysis and empirical research, aiming at current status of flue-cured tobacco production development in Henan province, This study analyzed function mechanisms of impact factors, and proposed to growers, tobacco business, tobacco industry and research institutes in hand, speeding up the construction of brand-oriented base unit; vigorously promoting the construction of modern tobacco agriculture; innovating flue-cured tobacco production organization and management model; speed up the transfer of planting to more favorable areas and adjustment of planting structure; perfecting flue-cured tobacco production science and technology support system; increasing growers; relative benefit and promoting growers' income in planting area; establishing and improving tobacco leaf production support policies etc.

Key words: Henan province; Flue-cured tobacco production; Stability; Monopoly system

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