

A Study of Distribution of Sugar Industry in Guizhou

# 贵州糖业生产 布局研究

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# Welfare Effects of the EU ETS

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旱坡地种植的糖蔗(川蔗 12 号)坡度 20°左右



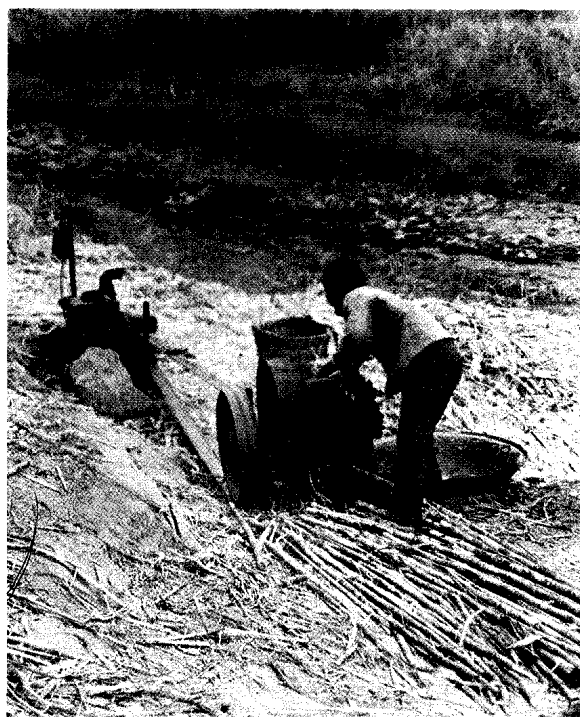
贵州自育品系田间评选



坝地种植的糖蔗(台糖 134)



贵州自育糖蔗品种(黔糖二号)现场验收



1992 年机器压榨糖蔗



1992 年 力木榨糖蔗



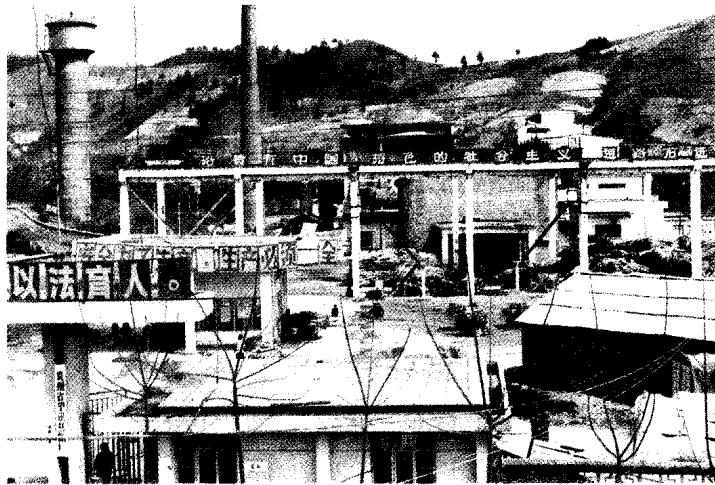
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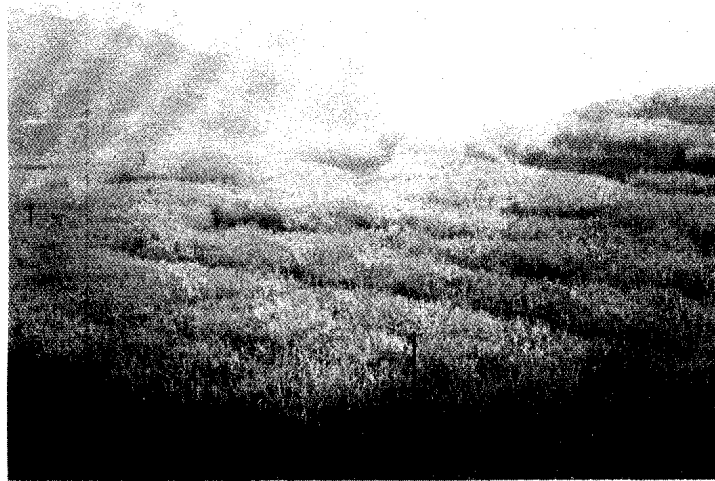
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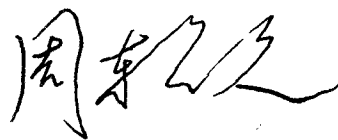


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## 序 言

《贵州糖业生产布局研究》是一部区域性的经济地理科学著作。在经济布局理论指导下,系统分析糖业生产的有利因素和存在困难,实事求是地制订糖业发展战略。贵州糖业生产表现为二重性。适宜种植甘蔗和甜菜作物的土地资源比较丰富,但开发利用少、潜力大;人力资源数量较多,但文化技术素质低;交通邮电通讯网络骨架基本形成。但距糖业生产要求差距大;制糖工业纵向与旧中国相比有很大发展,但横向与产糖省区相比规模小、基础薄弱;食糖产品省内市场广阔,但产品成本高竞争能力弱;糖业生产投资较大,县财政资金短缺,农民更是无能为力,需要国家扶持;等等。简言之,贵州糖业生产一是要充分发挥优势,二是要克服制约因素。克服制约因素的途径是,一靠政策,主要为符合贵州实际的经济政策,调动农民种植糖料作物的积极性;二靠增加投入,主要为增加对种植糖料作物和制糖工业的资金投入;三靠科技,主要对劳动者进行上岗前的职业技术培训,培养引进高层次人才,实施糖业生产、管理科学化。

经过几年耕耘,《贵州糖业生产布局研究》终于问世。它阐明贵州“少边穷”山区带普遍意义的农村经济发展模式,即以市场为导向,系统分析山区经济发展的资源优势 and 制约因素,进行产业优选,通过国家扶持,形成支柱产业,逐步现代化、专业化和区域化。这不同于我国农村经济发展的“苏州模式”、“温州模式”、和“珠江三角洲模式”。本书的综合性、战略性、科学性和实际应用性,不仅为制订贵州糖业规划和种植糖料作物提供科学依据,而且为贵州经济区划、区域规划、国土规划、城镇规划、区域产业结构调整 and 制定地域发展战略等提供参考,同时也是教学活动难得的参考书。



1995年10月

## Preface

《A study of Distribution of Sugar Industry in Guizhou》is a scientific work on regional economic geography. It systematically analyses the favourable factors and difficulties of sugar industry. It has practically worked out a developmental strategy of sugar industry guided by the theory of economic distribution. The sugar production in Guizhou has its own particular features. There are vast areas suitable for planting sugar cane and sugar beet, but it hasn't been put into full use yet; there is rich labour resource, but its quality is at a low level; the frame of communications and transport has been formed, but it still can't meet the demand of sugar industry; compared with old China, Guizhou's sugar industry has developed, but compared with other sugar producing provinces or regions, it is still underdeveloped and at a small scale; Guizhou's sugar products have a large market in the province, but the high cost is unfavourable for the competition with those from other provinces; sugar production needs large investment, but neither the local government nor peasants themselves are able to supply for it. In short, Guizhou sugar industry should make full use of its advantages and overcome its strait factors so that it will be greatly developed. The following measures can be used to deal with the strait factors. First, relying on economic policies which are corresponding to reality in Guizhou to initiate farmers' enthusiasm to grow sugar plants. Second, increasing investment in capital for growing sugar plants and sugar industry. Third, applying science and technology to professional training for labourers before their work and for high-level personnel in scientific production and management of sugar industry.

《A Study of Distribution of Sugar Industry in Guizhou》has been finally published after a few year's efforts of the writers. The book describes a rural economic development pattern which is significant for minority, remote and poor mountainous areas in Guizhou. Guided by market, the pattern systematically analyses the resource advantages and restraint factors of economic development in mountainous areas so that a best choice of industry by means of nation's support

and the chosen industry will gradually be modernized, specialized and become regional. This pattern is different from other kinds of patterns for rural economic development in China, such as Suzhou Pattern, Wenzhou Pattern and the Pearl Delta Pattern. This book is comprehensive, strategic, scientific and practical. It not only provides scientific basis for laying down plan for sugar industry in Guizhou and for growing sugar plants, but also gives advice for planning of economy, region, land resource, township, regional industry readjustment and regional development strategy. It is a useful reference book for teaching as well.

**Zhou Chao-jou**

**Oct. 1995**

**(马沈龙 译)**

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# 第一篇 贵州甘蔗生产的条件

## 第一章 甘蔗栽培的自然条件

甘蔗属热带、亚热带作物,具有喜高温,需水量大,吸肥多,生长期长等特点。根据甘蔗的遗传特性,人们常用的繁殖方式有两种,一种是有性繁殖(种子繁殖),另一种是无性繁殖(营养器官繁殖)。育种科研工作用有性繁殖,原料甘蔗生产用无性繁殖。甘蔗从下种到收获整个生长过程,一般可分为萌芽期、幼苗期、分蘖期、伸长期和成熟期等五个阶段。自甘蔗下种后至萌发出土的芽数占总萌芽数的80%称为萌芽期,其中萌发出土的芽数占总萌芽数的10%、50%和80%以上,分别称为萌芽初期、萌芽盛期和萌芽后期。自芽萌发出土后有10%发生第一片真叶到50%以上的蔗苗发生5片真叶止,属幼苗期。甘蔗幼株基部具有密集的节,每节上有侧芽,条件适宜时可萌发成新苗,称之为分蘖。自有分蘖的幼苗占10%起至全田幼苗已开始拔节,蔗茎平均伸长速度达每旬3厘米时称为分蘖期,其中分蘖的幼苗占10%、30%、50%以上,分别称为分蘖初期、分蘖盛期和分蘖后期。甘蔗伸长是蔗叶大量抽生、蔗茎伸长增粗生长,蔗茎伸长包括节数的增加和节间的伸长增粗,蔗茎节数的增加是茎尖生长锥分生的结果,它与叶片数的增加相一致。甘蔗自开始拔节且蔗茎平均伸长速度达每旬3厘米以上起至伸长基本停止,称为伸长期。成熟期分为工艺成熟和生理成熟。工艺成熟是指蔗茎蔗糖积累到最高的阶段。自蔗茎上下锤度的比数达0.9起至1.0止均属工艺成熟期(简称成熟期)。生理成熟则是指在适宜条件下,甘蔗经过一段时间的营养生长后,茎顶端生长锥分化由营养生长转化为生殖生长。从幼穗分化开始至抽穗开花结实为止,这称为生理成熟期。甘蔗在每一个生长阶段都有其特点,对于热量、光照、水分等外界环境条件都有不同要求和反映。

### 一、热 量 条 件

温度是反映热量的一个重要指标。甘蔗萌芽期:种子发芽需最低温约18℃,以26~30℃为最适宜,幼苗出土后对低温较能耐受,在4℃连续两天不会冻死,至18℃幼苗尚能缓慢生长。种苗萌发的一般情况是,蔗芽在气温13℃即可萌动,在良好的萌发条件下,低于12℃蔗芽亦可萌发,最壮的芽甚至低至9.5℃亦能萌发(*Elements* 1965);在13℃以上,随着温度增高,萌芽逐渐加快,20℃以上,萌芽明显加速,25℃以上萌芽期缩短,萌芽率提高;种苗萌发最适宜温度为30℃左右,超过40℃则严重抑制蔗芽萌发。不同种和品种对温度的反映不同,如割手密耐低温力最强,热带种最差;对最适宜温度的要求割手密为25℃,而热带种高达32~34℃。幼苗期:种根(种苗根)自种苗节上的根点(根原基)发出,当气温低于10℃时,生长趋于缓慢甚至停止,随着温度的升高,发根率渐高,根生长速度快,根毛多,根冠发达,种根逐渐被苗根(永久根)所替