Critical Chorology and Peasant Production: Small Farm Forestry in Hojancha, Guanacaste, Costa Rica.

Michael Stephen Yoder
Louisiana State University and Agricultural & Mechanical College

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CRITICAL CHOROLOGY AND PEASANT PRODUCTION:
SMALL FARM FORESTRY IN
HOJANCHA, GUANACASTE, COSTA RICA

A Dissertation
Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy
in
The Department of Geography and Anthropology

by
Michael Stephen Yoder
B.B.A., University of Houston, 1981
M.A., University of South Carolina, 1989
December 1994
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PREFACE

In the summer of 1991, I travelled throughout Costa Rica for two months with some 20 other graduate students as part of a field course, Tropical Managed Ecosystems, sponsored by the Organization for Tropical Studies (OTS). By participating in the course, I hoped to broaden my knowledge of the ecological aspects of Central American small-farm agriculture. Based on fieldwork I had conducted a year earlier in Costa Rica's Valle del General, I had intended to write my dissertation on changes in that coffee zone emanating from that locality's integration in the world economy. I had established many contacts in both San Jose and the village of Santa Fe de Pejibaye in the Valle General. In short, the next three years of my life were "mapped out."

During the OTS field course, however, my attention suddenly and unexpectedly turned to another area of Costa Rica. One of the research sites was a community called Hojancha in the Nicoya Peninsula, where local officials and farm families were experimenting with forestry as a means of reversing disturbing trends in poverty and land degradation. It was obvious from my first view of Hojancha that the community was quite different from other recent frontier settlement zones.

Santa Fe de Pejibaye provided me the opportunity to hone my skills as a field researcher of cultural geography
in Costa Rica. But, Hojancha called louder to me, and inticed me to go there instead to investigate the "big questions" about connectivity between a small farm community and the global economy. The present document is the result of eight memorable months of fieldwork in Hojancha and several additional months of archival and library research in San Jose and The United States.
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ABSTRACT

The "new regional geography" is an attempt to fuse traditional regional geography's concerns with cultural and environmental uniqueness of places, with political economy's regard for the nature of global and local structures guiding resource allocation. The approach infuses chorology with theory, and political economy with place-specific empirical research. Most studies exemplifying the new approach have been of industrial localities of Europe and North America.

This dissertation is a case study of regional transformation in a Third World locality, the canton of Hojancha, in Costa Rica's Nicoya Peninsula. The approach utilized is "critical chorology," a variant of the new regional geography that fuses traditional chorology with aspects of critical social theory. Critical chorology is distinguished by its stronger focus on environmental change. The empirical findings of the study suggest that Hojancha's contemporary regional economic and environmental changes are linked to each other, and to structural changes in the world economy.

Hojancha's contemporary transformation has been remarkable. Until the 1950s, small farm production of basic grains and cattle, both for subsistence and market, dominated the locality's economy. The shift in emphasis toward market-oriented beef production bonded the region
more tightly with the global economy, but also marginalized nearly half the region's peasantry, and accelerated land degradation. To combat poverty and environmental deterioration, community leaders, led by the local priest, successfully lobbied the Costa Rican state and various multinational development agencies for assistance in constructing housing, improving infrastructure, and introducing forestry as a small farm persistence strategy. A feature of Hojancha's "politics of place" is the distinctive connections between community leaders and the PLN, or National Liberation Party. Because of these connections, forestry, housing and infrastructure projects have materialized. Forestry, a centerpiece of the contemporary Hojanchan economy, has provided a basis for many smallholders to persist. Fluctuations in tree seedling markets, however, have reinforced social class formation and downward social mobility for some smallholders.
CHAPTER ONE
INTRODUCTION

The countries and subnational regions of the tropics, their societies, cultures and environments, are in a state of rapid transformation. The days are all but gone when significant numbers of indigenous or peasant peoples of the tropics lived in isolation from the "modern world." Images and reports of tropical indigenes-in-transition are staple items in today's documentary cinema, radio, and glossy print journalism. It is common knowledge that African herders, Pacific Island fisherfolk, and Central American farmers wear factory-made clothing, listen to factory-made radios, and sport factory-made tools. Sahelian herders are wearing "made-in-Mauritius" tee-shirts, Fijian fishermen are moving to Jamaican reggae music, and Central American farmers are felling forests with chain saws from North America.

Today, regions and places that are not plugged into the world economic system in multiple and cross-cutting ways are the exception. Similarities in clothing worn, culture consumed, or crops produced may give the illusion of an increasing homogenization of traditional peoples' lifestyles and livelihood patterns throughout the tropics. In part, this is true. But, at perhaps a more profound level, millions of villages, localities, and larger subnational regions of the Third World are each
experiencing participation in the world system in different and particular ways.

Geographers who study such particularities are once again finding themselves at the forefront of social science research. Traditional regional geography, or chorology, which provided the main focus for the discipline from the 1920s until the 1950s, came under attack for being overly concerned with anomalies and description while ignoring underlying general laws and theory (Guelke 1977). Adherents of the "new regional geography," however, argue that with the global economy's constant reshaping, to understand that system, the structures underlying it, and the regional reorderings it brings about all over the world, one must study how particular places adapt to and are changed by it (Sayer 1989).

Since the early 1980s, many geographers, particularly those disillusioned with positivist approaches, have been calling for such a "reconstructed regional geography" to integrate ethnography and political economy (Sayer 1989). This trend is borne out of a dissatisfaction not only with traditional chorology's idiographic emphases, but also with the overly-generalizing (or non-empirically substantiated) theories of political economy and logical positivism. "Theoretically informed empirical research" is a phrase Sayer (1989: 253) uses to describe the new approach. It is concerned with discovering the differences from place to
place of the effects and workings of larger scale (i.e.,
global and national) economic and social processes (Pudup
1988: 379-81). One of its major premises is that social
structures and spatial systems are created and recreated by
people in specific places, an idea which political economic
approaches too often ignore (Gilbert 1988: 208).

Objectives

This dissertation has interrelated theoretical and
empirical objectives. It is an attempt to apply the new
regional geography approach to the small region of
Hojancha, a community in the central mountainous zone of
Costa Rica’s Nicoya Peninsula (Fig. 1-1). My goal in
studying Hojancha has been to understand how the global
political economy and local efforts have shaped the recent
and dramatic changes in the community’s economy,
environment and society. The analysis is centered on the
emergence of forestry as a strategy that offers many
smallholders a means of subsistence and persistence. To
accomplish my goal, I worked as a human geographer, at
times viewing the people and place as a journalist might,
to reveal Hojancha’s story as revealed to me by Hojanchans.
Through eight months of field research, I was able to
recover the story behind Hojancha’s regional formation
through the efforts of its people to adjust to changing
political and economic forces at different scales, and to
problems posed by local environmental degradation.
FIGURE 1-1
COSTA RICA
Like the studies categorized as traditional chorology, this study involved a holistic accounting of the many geographic facets of the region: its physical environment, population characteristics, settlement history, economic activities, social structure and politics. But this dissertation goes beyond traditional chorology. I felt it necessary to understand more fully the crises the region has been forced to face and overcome throughout the twentieth century, and to understand the nature of Hojancha's connections with other regions of Costa Rica and beyond. I took a critical theoretical posture, and sought to uncover the "hidden" social phenomena imposing constraints and providing opportunities for the people of Hojancha in the living of their daily lives.

I call this blending of chorology and critical social theory "critical chorology." The prime advantage of critical chorology, as I will argue, is its ability to blend empiricism with those aspects of contemporary social theory concerning human uses of space (or the "social construction of space"), the meanings of place, attachments to place, and the political particularities of place. It treats the "locale," or region, as the "meeting ground," or the physical setting, of local actions of individuals and larger scale structural forces. Critical chorology also incorporates the physical and biotic aspects of environment which condition local action and structure alike.
Hojancha lends itself well to a regional study of this type. The story of the canton, or county, of Hojancha is unique by the standards of Guanacaste, the province within which it is located. The canton's settlement history was dramatically different from that of other parts of the province, in part due to its environmental characteristics. The community is culturally and ethnically different from neighboring cantones. Even the patterns of political affiliation are different from the rest of the province.

The case of Hojancha challenges much of the conventional wisdom concerning small rural regions located within the periphery of Central American countries. Relative to most Central American localities, the community only recently began participating in the global economy, and hence, the process of capital formation. These activities, combined with the canton's infertile soils and steep slopes, have produced environmental degradation and poverty, a pattern typical of Central America. In recent years, however, Hojancha has departed from the typical Central American scenario. The region has in many ways surpassed neighboring communities of Guanacaste in terms of peasant persistence. For example, the small-farm forestry which today is in part a response to the community's recent crises, has enabled many small family farm units to survive intact. As a result, it has served to put Hojancha "on the map," to strengthen its linkages with other regions of
Costa Rica and beyond. Hojancha has become a center of innovation and diffusion of small-scale forestry technology. I will argue that these recent and dramatic changes are the "essence" of the region and regionalization of Hojancha.

The essence of the region of Hojancha, the meaning of that place to Hojanchans and others, and the various economic and political activities underlying the region are the outcomes of a series of "conjunctures" emanating from different places and operating at different scales. A series of historically-contingent events and actions have coalesced, forming and reforming the region. These conjunctures include changing social, economic, political, and environmental conditions, and other phenomena embedded in the local history, shaped by and shaping local biographies. When combined in place and time, these conditions have generated new outcomes, actions, and circumstances, subsequently leading to reconstitutions of the region. As Pred (1984:279) suggested, regions such as Hojancha can be viewed as "historically contingent processes" in which places "constantly become human products." I will argue throughout this work that Hojancha, the region, represents in effect a process of local people, or "agents," continually competing with those of other regions for scarce resources in an effort to achieve improvements in their way of life. Of course,
competition in the realms of production, markets, and power occurs within the region as well. Thus, structures exist at the local scale as well as at national and larger scales. The territory corresponding to this intra-regional competition coincides with the territory corresponding to the alliances formed out of common purposes. Both of these occur within the political boundary of the canton. The study area was, therefore, easily delineated, and the processes which comprise the field of inquiry of the approach of critical chorology were easily identified in the study area.

**Methodology**

Thrift (1983: 39) provides one possible methodological outline for the new regional geography, and one that is appropriate to critical chorology:

No doubt, any reconstituted regional geography can start conventionally enough with a compositional account of "the regional setting." This involves, first of all, all those geographical determinations that can be grouped under the general heading of topography; such things as geology, hydrology, and climatic conditions which have likely been changed already by the impacts of the societies over the years. An account of the organization of production in a region is then needed, which involves ascertaining the level of the productive forces and the form of the productive relations, concentrating on the labour process. This emphasis leads, under capitalism in particular, to an outline of the class structure of a region. . . .Finally, the local form of the state must be taken into account.

In following this approach, I have identified several "constituent components" of the structures of the study region's social relations. These include the "..."
regionalization of the political and ideological processes of domination used to maintain the social relations of production" (Gilbert 1988: 209). That is, I found it necessary to identify and understand the way the region's identity has been constructed through day-to-day politics, and the day-to-day workings of the locality's economy. It was obvious to me upon my first visit to Hojancha that such processes lie at the heart of the region's uniqueness. In addition to the strong political component of Hojancha's regional identity, there exists an economic component. Markets for forestry and agricultural products are particularly influential in the formation and maintenance of the region's class dynamics, and by extension, the region's identity.

To identify and understand the nature of these structural properties and the actions on the part of local "agents" to adapt to, or even to alter, these structures, I carried out eight months of intensive field research in Hojancha. This research involved traveling the study area's remote and accessible roads on an enduro motorcycle. I conducted interviews of members of 88 families that operate farms, and 31 families earning their livelihood primarily through wage labor. I observed farm activities and related transportation and marketing activities on my numerous motorcycle "outings" throughout the study region. I observed a variety of material indicators of living
standards, such as housing, modes of transportation, and farm equipment. I observed the condition of the landscape, which ranged from deliberate land improvements to unintentional land degradation.

I questioned farmers about their crop and livestock choices, and the reasons for them. I paid particular attention to diversity of activities with respect to farm size, land quality, and labor utilization. To aid in developing a typology of farm types, I asked each of the farm operators about their employment of labor and their own choices to hire themselves (or other family members) out as laborers on other farms. I interviewed wage laborers about their different activities and their success in finding work in each season. I found the ability of the region's economy to absorb its labor force to be seasonally variable. Appendix I is an explanation of the sampling technique I utilized to select these interviewees. Additionally, I found informal conversations with one or more Hojanchans at a time in such places as shops, bars, and restaurants to be quite illuminating. Such conversations typically revealed the nature of social and political structures in the community and what people think about them.

Summary of Chapters
Chapter Two provides the theoretical underpinnings of critical chorology, an approach derived from the "new
regional geography." A review of the relevant literature will trace the origins of the new regional geography, and discuss its place not only within the discipline of geography but within the social sciences and social theory in general. It is shown to be a fusion of traditional chorology, a branch of geography often thought to be excessively idiographic and void of analytical content, with political economy, currently understood as a radical, usually Marxian, critique of capitalism often regarded as deterministic, overly explanatory and general, and lacking in empirical detail.

Adherents, including this author, believe the new approach is a synergistic improvement over those two ways of studying human interactions in places. It recognizes that capitalism operates at many scales, from the global to the local (Johnston 1987: 209-210; Soja 1985: 178). The key to this synergy lies in critical chorology's inclusion of structuration theory, which posits that individuals are more than just passive recipients of the workings of the global economy. Instead, they are "agents" whose actions are not only successful in dampening the negative effects of the global economy, but can alter the structures of that economy to suit them (Johnston 1987: 217-218). Because capitalism operates at all scales, its structures, according to structuration theory, are essentially summations of all the local-level "agency." The locale, or
small regional setting, provides a window for viewing larger processes. Justification of the delineation of the study area is provided, based on the notion of scale posited in structuration theory.

The chapter also includes a review of theoretical literature addressing issues falling under the headings "peasant economy" and "peasant persistence." Such issues include markets of peasant-produced commodities, the relative importance of production and consumption within the peasant economy, class structure in peasant societies, the linkage of poverty and environmental degradation, and other conjunctural factors relevant to Hojancha's regional identity. While various Marxian and Chayanovian theories of the peasant economy and peasant persistence provide useful insight into the relevance of production and consumption, most fail to account adequately for the role of non-labor commodity markets in patterns of dominance and subordination (Brass 1991; Bharadwaj 1985). This chapter provides a theoretical basis for reinserting markets into the analysis.

Also addressed in the chapter is a theory of the state and the crisis of legitimation it constantly faces. The theory, described by R. J. Johnston (1984), views the state as a mediator between different competing interests, switching sides as often as is necessary to maintain the dominant (e.g., capitalist) mode of production. I argue
that such maneuvering by numerous government entities at various levels, is an integral part of Hojancha's regional processes.

Chapter Three provides a detailed description of the study area, the physical and historical setting where structure and agency interact to create the unique place, Hojancha. Included are descriptions of the physical landscape, climate, terrain, soils, water resources, and recent transformations of the landscape, including changes in vegetation cover and economic land uses. The chapter includes a review of the literature of the legacy of the Chorotega, the pre-Columbian people of the mountainous central portion of the Nicoya Peninsula. Their mode of agriculture, and their trade with other Amerind groups are described.

The chapter also addresses early Spanish settlement and the subsequent transformations of the central Nicoyan mountainous zone from 1520 to the end of the nineteenth century. Among the key events described are the social and environmental impacts of the "conquest," including the plunder of the indigenous economy, the introduction of slavery, and the imposition of the encomienda system. In addition, the chapter discusses Nicoya's re-entering of the agricultural export economy through mule production and trade in the eighteenth century. Finally, the chapter addresses the effects on the Amerind economy of the
privatization of property, the Costa Rican livestock boom of the nineteenth century, changes in the system of tribute, and the forced entry of Amerinds into the money economy.

The focus of Chapter Four is frontier settlement of Nicoya's central mountainous zone in the first half of the twentieth century. An important aspect of this historical period is the ethnicity change in frontier settlement, from "misplaced" Guanacasteco-mestizos to "Cartagos," or Whites from the Valle Central, the country's heavily populated coffee region. The dominant settlement form in this period was the small farm producing food crops for subsistence.

In the chapter, a number of conjunctures are discussed which underlie a series of transformations in land use, economy, society, and environment. These include the deepening of market linkages for food crops and land, and the closing of the frontier in the 1930s. The latter created shortened fallow periods, accelerated deforestation, and increased land concentration. As a result, many unsuccessful smallholders were forced to work off-farm. Finally, the chapter includes an analysis of the region's locational competitive disadvantage in national basic grains markets, the subsequent decline of market-oriented production of basic grains, and the emergence of the Guanacastecan cattle boom in Hojancha. The cattle boom was solidified by increased global and national demands for
beef, the comparative advantage of the region at small-scale cattle production, and the subsequent need for increased stocking rates.

Chapter Five examines the strengthened linkages between Hojancha and the global economy between 1960 and 1980. The chapter describes the connections between Hojancha's changing society and landscape on the one hand, and the global and national economic and political forces underlying the canton's economic activities on the other hand. These macro- and meso-level forces became increasingly influential as capital accumulation expanded in the study area. During the period, the cattle crisis deepened, paving the way for a dramatic regional decline marked by dependency, depopulation, deforestation and poverty. Increased landlessness resulted in the dual processes of emigration and proletarianization of much of the peasantry. The lack of alternative cash-generating farm activities for many Hojanchans, combined with a declining compatibility of small-scale farms and cattle production, proved devastating to the Hojanchan economy. Increased stocking rates of livestock, and expanded grazing hectarage resulted in soil erosion and deforestation.

The Costa Rican state, in its efforts to maximize foreign exchange, has responded in multiple ways to global market trends in beef, coffee, and basic grains, the three main Hojanchan product categories in the 1960-80 period.
Though not a labor-intensive activity, beef production has received the bulk of state agricultural credit, even in years when global demand for Latin American beef was less favorable. Consequently, marketing is well-developed at the national and provincial levels, and even at the local (study region) level. The dependency of Hojancha on international and domestic beef markets has remained to the present.

Basic grains, the traditional mainstay of the Hojanchan campesino economy through the 1950s, have not received the attention by the state that export-oriented crops have enjoyed. The primary reason for this neglect is the incapability of these crops to generate the foreign exchange earnings upon which Costa Rican development as a whole has become dependent. The chapter illustrates how international development agencies and other creditors of the state continue to dictate austerity measures disfavoring the basic grains sector, despite the fact that most Costa Rican campesinos are involved in producing the crops.

Coffee production, like beef, has become an important basis for Hojancha's connections with the global economy. The chapter provides a description of political and economic characteristics of coffee production and marketing at the international and national levels. The Costa Rican state's involvement in the coffee sector is described,
particularly its development and support of the smallholder cooperative sector. Hojancha's relative success with coffee has come about through the establishment of a producer cooperative and the generally-favorable trends in international prices.

Chapter Six addresses the emerging small-farm forestry of the 1980s and 1990s, and discusses the conjuncture of events and conditions underlying the shift toward forestry. These include outmigration, unemployment and underemployment, threats of further landlessness and environmental degradation from years of over-emphasis on cattle production, and emerging markets for forest products. The political economy of forestry involves more than simply the presence or absence of markets for forest products. The state and various multi-national financial institutions have created economic incentives for reforestation. As a result, the locality has become a center for forestry-related activities and their diffusion to other communities of the country. The changes in the Hojanchan landscape, society, and typology of farm production units resulting from forestry are discussed. These changes have occurred in conjunction with differential access to markets and resources among small, medium, and large producers. Hojanchan development involving forestry is characterized by uneven development,
due especially to inadequate planning in the tree seedling market sector.

Chapter Seven discusses contemporary variations in land use in the study region. Forestry, to the extent that it has been adopted by Hojancha's campesinos, is seldom the only activity of a given farm unit. Land-use decisions are shown to be a function of several factors, including location with respect to roads, altitude, soil and slope conditions at the farm level, and farm size. Like land use decisions, development in general exhibits spatial variability throughout the study region. Variability in human geography between each of the study region's lowland and highland zones is discussed. Finally, the temporal and spatial geography of labor is discussed.

Chapter Eight examines the regional reconfiguration of Hojancha from 1955 to the present, with the aim of illustrating the applicability of the critical chorology approach to that small region. The chapter's main focus is Hojancha's politics of place, which involves forestry, small farm persistence, and the political distinctiveness of the locality within the Nicoya Peninsula and within Costa Rica. The study area's distinctiveness is considered within the longstanding ideology of Costa Rican exceptionalism. Structure, agency, and political connections between Hojancha and the Costa Rican state are highlighted. These factors underlie Hojancha's development
as a core for the diffusion of small farm forestry and its associated technologies to other Costa Rican regions of reforestation. Through its political connections, the region has become a visible recipient of development subsidies in forestry, housing, and other economic sectors. Chapter Nine provides a summary and conclusions.

Conclusions

I argue throughout this work that a critical approach, which goes beyond description, is necessary to understand the dramatic changes that have occurred in that part of the Nicoya Peninsula since Wagner’s (1958) classic study of the peninsula in the 1950s. He witnessed the beginning stages of the region’s participation in the national and global economies. Many of the small-farm persistence mechanisms he observed have subsequently broken down. Only by viewing Hojancha as "a window onto wider processes" (Lovering 1989: 10) of social and geographical relations can we understand the forces underlying the dramatic changes that have occurred there since the 1950s. Likewise, to understand the larger processes requires an examination of the actions of local people in a region such as Hojancha, as they continually react to, and attempt to influence, those structures.
CHAPTER TWO

THE THEORETICAL RATIONALE OF CRITICAL CHOROLOGY

While contemporary social theory has emphasized the historical specificity of social life, it has generally failed to acknowledge a similar specificity in spatial terms. Traditional chorology exhibited a studied preoccupation with the site-specific nature of places but proved incapable of integrating notions of regional structure within any wider conception of historical process. Refusing to appropriate for itself this necessary conceptual foundation, it became largely reduced to inductive description void of substantive analytical content (Warf 1988: 341).

Introduction

The approach known as "the new regional geography" is an attempt to address the contrasting weaknesses of traditional regional geography and political economy, and through combined reconstruction, create new ways of doing both. In turn, by merging the two, the discipline of geography can better position itself to meet the challenges of a changing world, and make original contributions to social theory. While Marxian political economy can make valid claims that it has surpassed previous or competing schools of thought in uncovering the inner workings of capitalism (Peet 1985), and other modes of production for that matter, it has not provided a sufficiently complete framework for understanding or explaining contemporary global social processes (Soja 1985, 1989; Lovering 1989). The economic restructuring which resulted from, and helped to create, the breakdown of Fordist-style industrial
capitalism and the shift to a service economy in the economically advanced countries is regional in nature, a patchwork of tendencies and countertendencies across space and time (N. Smith 1987: 60). Attention is turning now toward specific localities and the local ramifications of, and contributions to, these global developments. The new place-based approach challenges the widespread assumption of "modernist" social science that global development and its related technological advancements in communications are gradually eroding the differences between places (Agnew 1987: ix; Entrikin 1989: 31).

Studies exemplifying the new regional geography have predominantly been of urban and/or industrial regions of the developed world, and particularly Great Britain. Perhaps the best known example is the CURS project (the program of Changing Urban and Regional Studies), initiated by the Economic and Social Research Council of England, to study changes in that nation's economic geography emanating from Thatcher's neo-conservative regime (N. Smith 1987: 60; Cooke 1987). Works integrating place-specific empiricism and social theory in Third World rural areas, or peripheral areas within industrialized countries occupied by marginalized cultures, are few in number.¹ This study, by using the "critical chorology" approach, a derivative of the new regional geography, is an attempt to provide a framework for understanding the multi-layered processes
underlying regional change in the community of Hojancha, Costa Rica. This exercise is also designed to add to the body of literature of recent attempts to apply the new regional geography to a Third World peasant region, in this case within Central America.

The "Place" of the New Regional Geography in Geographic Thought

A concern for the uniqueness of place, a prominent characteristic of the new regional geography, is not new to the discipline. Descriptive travel writings dating back to classical antiquity represent among the earliest foundations of geography (Livingstone 1992). Twentieth century attempts to define human geography in terms of place uniqueness can be separated into two main schools of thought, associated with Richard Hartshorne and Carl Sauer, respectively. These two versions of traditional "chorology" have tended to emphasize, to varying degrees, human-nature relationships such as agriculture. They exhibit aspects of science and art, of explanation and description (Entrikin 1991:15).

Hartshorne, (1939) following Hettner's prescriptions for geography, offered direction for the discipline during the mid-decades of this century. His approach focused on areal differentiation from place to place of interrelated phenomena (Guelke 1977: 2-3). Each region was itself a place of homogeneity with respect to the chosen
characteristics, but was different from other regions (Johnston 1987: 39). Following from this philosophy was his insistence that the study of aggregated individual cases was necessary to elucidate generalizations, yet he doubted that a geography concerned with the idiographic, the unique, could ever practically become primarily a law-seeking science (Guelke 1977: 2-3).

Instead of areal differentiation as the focal point of study, the landscape was the primary topic of the "Berkeley School" of geography, founded by Sauer. Sauer and his followers have studied cultural features in the landscape as a means to understand cultural processes, to uncover what the landscape reveals about the people who have occupied and created it. Sauer's version of cultural geography begins with the earliest human occupation of a given place, considers the processes behind the landscape changes all the way to the present, and is, therefore, more deeply historical than Hartshorne's version (Johnston 1987: 41-42).

Both the Hartshornean and Berkeley approaches have relevance for critical chorology. The Hartshornean concern for synthesizing the peculiar combinations of characteristics underlying regional uniqueness forms a partial basis for critical chorology's focus on the variability at the regional level of the workings of the global economy. As Johnston (1987: 42) suggests, the
Berkeley School's regard for diversity in landscapes and cultures, and its simultaneous recognition that the past conditions the present without strictly bounding contemporary human action, has parallels to "structuration theory," a useful concept to critical chorology described below. By failing to concern themselves with the inner workings of capitalism, however, geographers following these approaches have been ill-equipped to address landscape change and regional differentiation as they relate to social, economic, and political processes operating at multiple scales (Soja 1989: 36-37).

Traditional chorology has been widely criticized as academically isolated within the social sciences, and devoid of theory (Sayer 1989: 253-254; Archer 1993: 499). Post World War II geographers seeking to transform the discipline into spatial science attacked chorology as the mere description of places, an encyclopedic collection of facts (Pudup 1988: 369-70; Soja 1989: 38). Guelke (1977) has argued that Hartshorne's approach in particular is to blame for the decline of regional geography in the wake of the quantitative revolution, because of its emphasis on functional, as opposed to causal, relationships underlying spatial correlations. Furthermore, the Hartshornean emphasis on the spatial correlations of phenomena, rather than with the phenomena themselves (or even the causes of relationships) left chorology vulnerable to dismissal. In
In a similar vein, Duncan (1993: 518) argues that by placing culture at the center of analysis, rather than individuals and their social and political systems, Sauer failed to address adequately "the complexity of social structure."

In tracing the evolution of positivism within geography, Warf (1988: 341) asserts that it was not without faults of its own:

Regionalism was certainly not to be resurrected by the frozen geometries of positivism, in which a geography of "regions without theories" quickly became one of "theories without regions." The possibility of local uniqueness was abandoned in the search for "general laws" of explanation, whose function it was to show particular events to be the outcomes of more abstract forces.

Positivism's pursuit of general laws, then, did not adequately accommodate the particular as anything but an unexplainable anomaly or deviation.

The emergence of radical geography in the 1960s and 1970s is in large part due to quantitative geography's continuation of the emphasis on functional spatial relationships and simple correlations, without addressing underlying causes of the relationships (Guelke 1977: 2-4). A concern for the global problems of the day, such as overpopulation, poverty, and the threat of nuclear war, accompanied the assertion by Marxist social scientists that "...science is (not) independent of its enveloping material conditions, ... (but) in fact it is very much geared to its containing and constraining society. ..." (Johnston 1987: 194). That is, it plays an active role in
society and social process. Marxist geographers saw geography as a discipline particularly well equipped to address fundamentally the workings of capitalism, which they viewed as the very basis of the global problems. These geographers rejected those paradigms of the discipline, such as positivism, which they saw as co-opted by bourgeois interests. By infusing Marxian theory into geographic study, they hoped to provide the powerless with a new set of tools to understand the nature of domination and subordination, and patterns of spatially uneven development that characterize the geography of capitalism (Soja 1989: 73-74).

Structural Marxism, like positivism, was largely concerned with universal laws, and as has been suggested, equally detached from "questions of everyday life" (Warf 1988: 341). Cooke (1987: 71) argues that it "...offered deterministic, thus preordained, explanation, one result of which was to make research results unsurprising and thus uninteresting." Geographically uneven development is viewed as the shaping of places by the workings of global capitalism (Entrikin 1989: 32-33). Neo-Marxist and post-structuralist radical geographers increasingly are recognizing the differences from region to region of the workings of global capitalism. They increasingly realize that social structures and spatial systems are created and played out in specific ways in specific places. These
realizations provide the basis for a reconstructed regional
"Theoretically informed empirical research" is a phrase
Sayer (1989: 253) uses to describe the new approach, which
integrates ethnography and political economy to support the
latter with empiricism.

Warf (1988: 342) is careful to point out that a "sound
theoretical basis" remains important to the new regional
geography, "...to avoid a collapse into a confusing
welter of empirical data." By building upon theory, the
new regional geography can respond to the realities of
capitalism, whose inner laws involve the production of
uneven development as a means of reproducing its social
relations (Entrikin 1991: 21). To account for the
processes through which economic and social relations are
played out in regions, the traditional human-nature concern
of chorology has been broadened to include society. In the
new approach, "...the triangular relations between
people, society, and nature..." are seen as the basis of
region formation (Gilbert 1988: 210). The characteristics
of places that typically are "listed" in traditional
chorologic studies are placed in their social context in
the new approach (Agnew 1989: 9).

The Reinsertion Of Regions in Social Science

Four interrelated concerns of the new regional
geography, or "contexts of reinterpretation of the regional
question" (Soja 1985: 176) can be identified. The first considers regions and their place within the geographically uneven development of capitalism (Soja 1985: 176). The persistence and intensification of spatially uneven development under capitalism, and the related transformations of regions, have prompted a reassessment within social science of the role of regional differences in portraying contemporary social, economic, and political processes (Murphy 1991). Spatial disparities, both medium and outcome of capitalist development, are produced at multiple scales. As Soja (1985: 178) asserts, this spatial character of capitalism should no longer be treated within social theory solely as a separate outcome of capitalism; therefore, encyclopedic descriptions of such patterns are insufficient. The regional phenomenon should be treated as integral to capitalist origins, development, and survival.

The second context considers regions within the geography of the changing spatial division of labor. It includes the complex mosaic of national and subnational regional differences which the changing spatial division of labor creates (Soja 1985: 175-6). Regions are portrayed "...as the products of local actors situated within a wider division of labor" (Warf 1988: 342). The CURS project and its empirical studies of multiple localities in Britain has sought to identify and analyze the effects in those
localities of global economic restructuring and its shifts in the spatial division of labor (Pudup 1988: 381).

The deepening of capitalism's global division of labor is increasingly seen as the basis for increased attachments to locality and even nationalistic sentiments throughout the world (Murphy 1991). As Warf (1988: 342) states, "(i)nindividual regions play different "roles" (that is, enjoy different comparative advantages) within the national and international division of labor." Just as workers' tasks are specialized in order to enhance productivity and corporate profits, regions have assumed increasingly specialized roles in the global production and reproduction of capital. And just as workers compete for recognition, salary increases, and even job security, regions must increasingly compete with one another for markets, political clout, state and private investment, and infrastructural development.

A third related context of regions in the new regional geography, and one that has particularly strong relevance in the case of Hojanchan development, is what Zimmerer (1991: 444) refers to as the "politics of place." This relates to the interactions of elites and subordinate groups, such as the rural peasantry in the Third World, and the spatially variable character of these interactions. Local politics is an essential feature of the spatial economic restructuring occurring in the world today.
Indeed, Agnew (1987) has argued that political behavior at the level of multiple localities constitutes the national political systems that define the way global restructuring will occur in a given country. Furthermore, locality studies contribute to an understanding of the empowerment and/or disempowerment of economically marginalized groups. For example, much of the impetus of the CURS initiative had to do with the political (as well as economic) marginalization of some regions in Thatcher's Britain (Howitt 1992: 73). In his case study of highland Peru, Zimmerer (1991: 444) shows how the peasants in one locality historically resisted domination by estate owners, permitting them to successfully utilize the political arena to mobilize and pressure the state for needed subsidies for developing their montane wetland agriculture.

The fourth context within which regions are considered involves "...the retheorization of space in social theory and philosophy" (Soja 1985: 176). Patterns of spatially uneven development, an increasingly complex spatial division of labor, growing regional sentiments or attachments to place, and the formation of regions around some common political cause or action are among the events which many theorists view as "the social production of space" (Soja 1985: 176). The social production of space
provides a place for regions and regional processes within social theory.

Soja (1985: 177-78) identifies five key premises of the contemporary retheorization of space, all of which have particular relevance to critical chorology. First is the "existential link between spatiality and human agency," or more simply, the fact that existence, action, and thought occur in space and are conditioned by space; they do not occur on the "head of a pin." Secondly, parallel to the Marxian notion that humans make their own history but not under conditions of their own choosing, the reinsertion of space in social theory implies that humans create their own geographies, but these are conditioned by prior geographies and histories. Thirdly, space is seen as both a medium and an outcome of social practices. Soja refers to this combining of social and spatial relations as the "socio-spatial dialectic." The fourth premise is related to the third: social relations are spatially concrete. Fifth, the social construction of space is characterized by conflict and contradiction, and therefore, is filled with ideology and politics.

Perhaps the work most commonly associated with the reinsertion of space and place in social theory is that of Anthony Giddens (1984), and his theory of structuration. Unlike the structural Marxism of Althusser (1982), structuration theory places the individual at the center of
analysis. Individuals and their behaviors constitute action, or "agency," but the capabilities of agents to act is always constrained in some way by institutional contexts, or societal structures. Despite this boundedness of action, agents are knowledgeable and aware of their capabilities to maneuver within the institutional (structural) contexts. These structures are themselves not only constraining, but enabling with respect to human action. Thus, structure and agency are dialectically intertwined; that is, they constitute a mutually-reinforcing duality. Even the most seemingly powerless members of society are able to achieve at least some degree of control over conditions of their social existence (Giddens 1982: 29-32).

Structuration theory is not a negation of structural Marxism, but rather builds upon it by adding human action to society's materialist base. What it rejects are structural Marxism's reification of economic structures, the treatment of individuals as passive recipients of the economic whole, and the treatment of economic processes as the cause of human behavior (Johnston 1987: 217-18).

Within structuration theory, regions are viewed as the contexts, or settings, for the various social, political, and economic processes; the playing fields of the various structure-agency interactions (Pudup 1988: 383). Individual thoughts and actions are located within specific
historical and regional contexts. For example, through learning in particular places, people develop their interpretations of the social structure of each place, and their position within that structure (Johnston 1987: 210). Regional geographers are, therefore, able to recognize the differing ways the people of different places interpret their conditions, and transform their resources and value systems in response (Warf 1988; Zimmerer 1991).

Giddens (1984: 118) defines a "locale" as the use of space as a setting of interaction. It is more than just the combination of physical geographic features and human artifacts in a particular location, but is also the context of social interactions, and as such, is a human construct. Locales express the spatial (as well as temporal) structures of peoples' lives (Thrift 1983: 40). A region, too, is more than just a spatially-defined localization, but is defined by some specified sets of "routinized social practices" occurring in space (Giddens 1984: 119). When enough of these intersect spatially, with a common node or focal point, a region, a "structure of interaction," comprised of different but connected settings for interactions, exists (Thrift 1983: 40). Pred (1984: 279) takes the idea a step further, and describes the region as "...a process whereby the reproduction of social and cultural forms, the formation of biographies, and the transformation of nature ceaselessly become one another."
The way in which the region-as-process originates and develops, varies with historical circumstances, and is, therefore, not subject to universal laws.

The functioning of agency in altering political economic structures that affect Third World or other peripheral regions of the world, has been described in a small number of recent studies. Warf (1988) applies structuration theory to describing regional change in the Pacific Northwest timber region. His analysis portrays timber and sawmill workers and their acts of protest as playing a definitive role in the shaping of economic and social conditions in the region. Zimmerer (1991) similarly applies the theory in his portrayal of peasants of the Colquepata district of highland Peru, and their effective lobbying of the social democratic government for subsidies to develop agricultural infrastructure. In a contrary way, however, Howitt (1992) effectively shows how Australian Aborigines in places such as Alice Springs and Tanami, are effectively blocked from exerting more than minimal influence over the conditions of their lives, because of state policy. He argues that, for the most marginalized groups of the world, there are limits to the power of agency; structure, in effect, has the final word.

In sum, regions, comprised of the networks of locales elaborated in structuration theory, are relevant to social theory, and of fundamental import to critical chorology,
because social interaction occurs in specific ways in specific regional settings. For example, uneven development and the global division of labor which characterize capitalism translate to regional differences. The way capitalist structures are played out differently in different places has a lot to do with the "meaning of place" in each location, the different forms of attachment to place, and how individuals interpret structures differently and act (and react) as agents in different ways (Entrikin 1991: 21-22). Also underlying regional differences are the different power struggles occurring at different scales. Inter- and intra-regional power struggles, which arise out of the unique networks of social interaction, are both the medium and outcome of regional differentiation (Gilbert 1988: 213). Likewise, the physical and bio-geographies of a region, such as Hojancha, condition and are conditioned by social, economic, and political processes occurring at the scale of the region, as well as at larger (i.e., national, global) scales.

Stated somewhat differently, the relevance of regions to social theory is that they can function as a window for viewing wider social, economic, and political processes. As Lovering (1989: 9) notes, these systems "...do not exist without people, (who) ...engage with each other, in their different contexts and roles, in such a way that these relationships constitute macro-social institutions.
"The economy is, after all, made up of people." In short, people are active participants in transforming or maintaining the structural conditions of their livelihood.

A number of small-scale locality studies will not simply represent a number of separate idiographic studies, completely dependent upon context, but in fact can inform general theory by broadening the vocabulary with which we analyze macro-level or meso-level systems. To do this, however, requires the recognition that capital formation is not a process disengaged from local context, but originates and is actualized in particular places (Sayer 1989: 260-61). The specific ways in which the commodity-producing system affects and is affected by local areas are neither predetermined nor predictable, because they involve the day-to-day perceptions and actions of ordinary people (Warf 1988: 342). Likewise, regional change does not occur in isolation, and should, therefore, be considered in its larger interregional context. Regional change and regional identity simultaneously shape and are shaped by mutually influencing local- and wider-scale spatial processes.

Defining a Region's Extent:

Hojancha's "Regional Character"

Whether place refers to a village or a metropolis, an agricultural area or an urban-industrial complex, it always represents a human product. Place, in other words, always involves an appropriation and transformation of space and nature that is inseparable from the reproduction and transformation of society in time and space (Pred 1984: 279).
As I discussed in the previous section, a region is the "playing field" where social structures and individual actions interrelate. The social structures are comprised of mutually influencing social, economic, and political processes occurring at different scales, and played out spatially in regions of different scales. These processes and the individuals in a region are mutually influential; the processes arise in regions, and reflect back on regions. Regional differences represent the different interpretations, experiences and actions individuals in different locations have with respect to the processes. Regional changes are the outcomes of shifts in the balance of interactions between region and structure, and between region and region, at multiple scales.

A region, then, is more than just a spatially-delineated location but is defined by some specific set of social practices characteristic of the location (Giddens 1984: 119). In the new regional geography, a region is

...the spatial organization of the social processes associated with the mode of production: the regionalization of the social division of labor; the regionalization of the process of capital accumulation, organized as a net of interwoven partial accumulation processes that have defined territorial bases; the regionalization of the reproduction of the labour force, whose logic relates the region of labour markets to the spatial organization of population; and the regionalization of the political and ideological processes of domination used to maintain the social relations of production (Gilbert 1988: 209).
Often, the different networks comprising the particular, localized social structures will overlap territorially to a significant degree, but rarely exactly. A shared local interest, however, emerges, providing a basis for regional identity (Cox and Mair 1989: 128-29). Examples include overlapping market and information networks associated with dominant sectors of the economy of a given area, such as agriculture, or a real estate development/banking economic complex. By carefully defining and studying the dominant sectors of a given locality, a region can be delineated that is not arbitrary (Cox and Mair 1989: 129).

As long as a group within an area is influential enough to develop regional norms, the region becomes sharply defined and differentiated from others. If no such social structure exists, the area will be absorbed by another region with a dominant group that has created its own regional unity (Gilbert 1988: 217). The implication of this idea is that "the politics of place" are especially important in region formation and regional identity. Critical chorology must, therefore, be attuned to the role of local political action in economic restructuring as it affects (and originates in) particular regions (Cox and Mair 1989: 129).

Obviously, the more complex the institutional framework is, and the more extensive the web of social
interaction characterizing a given location, the larger the region is (Murphy 1991: 24; Giddens 1984: 122). Also, depending on what the dominant economic and/or political forces of an area are, the size of the region will vary; some activities encompass more territory than others.

Likewise, as the nature of the activities and their social institutional contexts varies, so too do the extent of "core" and "periphery" dichotomies within and between regions. Core-periphery relationships exist at many scales, the largest of which is the "World System," comprised of core states and peripheral areas (Wallerstein 1976). Within a given country, such as Costa Rica, spatially-fixed "establishments" exist, which "...lie at the core of the structuration of dominant classes" (Giddens 1984: 131-32). Core-periphery dichotomies also exist all the way down to intraregional scales, such as within provinces, counties, towns, or even within smaller locales. But, the boundaries between core and periphery are often blurred in much the same way as the boundaries between social classes. As Soja (1985: 181) argues,

...there is no necessity that core and periphery be rigidly bounded or permanently fixed. Individuals in their lifetime can move from one class to another and back again, without destroying the antagonistic class structure of capitalist society. So too can areas and regions shift over time from core to periphery--and back again--without destroying the structural meaning of core-periphery relations in capitalist spatiality.
Just as there are middle classes, so too are there semi-peripheries (Wallerstein 1976: 231-33).

In many ways, Hojancha's "structuration of peasant persistence" has created a place for this study area within the semi-periphery of Costa Rica. This was not always the case. Until the region became a canton (county) of Guanacaste Province, it was firmly within the periphery of Costa Rica and the World System. As I argue in Chapters Six and Eight, the efforts of local agents have resulted in the establishment of Hojancha as a core region for the diffusion of small-farm forestry products and technology. This in turn has led in many (but by no means all) cases to upward social mobility. It is worth noting that if recent trends in the marketing of tree seedlings continue (Chapter Six), Hojancha could once again occupy a place wholly within the Costa Rican periphery.

The study area of this work, where I conducted the fieldwork and interviews, corresponds roughly to the northern half of the canton, or the portion containing some four-fifths of the canton's population. It is easily defined as a region, by virtue of its "web of social relations," a number of social, economic and political occurrences which roughly coincide spatially (See Fig. 3-2). The southern portion of the canton lies outside of this web. Other than by cantonal boundary, it is not linked to the northern portion in any significant way. The
southern portion has developed a separate regional identity, based on the coastal resort of Puerto Carrillo and a 3,000-plus-hectare, foreign-owned teak plantation. Its inclusion in the study area would, therefore, not be appropriate.

As explained in Chapter Three, the study area's unique (by Nicoyan standards) physical geography, characterized by small, steep mountains and intermontane valleys, forms a partial basis for regionalization. So too do that area's unique colonial and post-independence settlement histories. The devastation of so many of the study area's small- and medium-sized farms from the "cattle boom" of the 1960s and 1970s, was unique not only by Nicoyan and Guanacastecan, but also Costa Rican standards. Individuals in the region recognized a common purpose, and so created a political region (a canton) in 1972 to enhance political lobbying efforts as a means of overcoming these cattle-related problems. Contemporary regional identity is based on, and reinforced by, small farm forestry and the political mobilization resulting in the development of that and related activities. The "politics of place," then, is perhaps the most important context for interpreting the regionalization of the Hojanchan study area.
Conjunctures and Critical Chorology: 
A Reinterpretation of the New Regional Geography 
for Third World Rural Localities

To apply the "new regional geography" to a Latin American peasant-dominated locality, it was necessary to incorporate the historical and ecological dimensions of Hojancha's regional formation to perhaps a greater extent than is normally the case with that approach. The advantages of traditional chorology, especially its holistic description of place, are especially evident in a region such as the Hojanchan study area. The inclusion of pre-colonial indigenous settlement and land use is essential to this study, because it formed the foundations for settlement and land use in all subsequent periods of the region's history, including the present. The relation between humans and landscape for the nearly two millennia of human occupation of Hojancha is best described as close or "intimate," and as such, requires the inclusion of a description of the region's topography and soils.

The dramatic changes throughout the region's historical geography of settlement and land use are the results of "conjunctures" of social, political, economic, and ecological events. Regions, such as Hojancha, are not formed out of a sequence of independent events in a specific portion of the earth's surface. Instead, they are formed out of a historically determined sequence of
connected events that nowadays involve the workings of
capitalism at various scales (Gilbert 1988: 216; Watts
1987: 292-98). The conjuncture, as a "constellation" of
global, national, and subnational forces, arising out of
crises and forming new ones, often involves environmental
change (Watts 1987).

In studying marginalized rural localities of the
world, it is necessary to examine the underlying diverse
"mechanisms of marginalization," and the "linkages to wider
social processes" (Howitt 1992: 77). The conjuncture is a
crucial feature of critical chorology, because it links a
traditional rural locality and its specific, localized
activities with the global political economy. Furthermore,
the elusive duality of "tendencies and counter-tendencies," and
the "contradiction between equalization and
differentiation" that characterize geographically uneven
development, are conjunctural; that is, they are specific
to time and place (Soja 1985: 179). The understanding of
conjunctures makes possible the understanding of Hojancha’s
unique movement from periphery to semi-periphery; the
upward social mobility of many of Hojancha’s peasants in an
age of increasing marginalization of the Costa Rican
peasantry in general.

Critical Chorology and the Environmental Dimension

The linkage of environment and peasant well-being in
Third World locales is an increasingly important element of
conjunctures. This linkage, therefore, is essential to critical chorology. The theoretical literature on Third World rural development is recognizing more and more the fundamental importance of linking environment and socioeconomic conditions (Blaikie and Brookfield 1987; de Janvry and Garcia 1988; Gradwohl and Greenberg 1988; Hecht and Cockburn 1989; Mellor 1988; Oram 1988; Parsons 1976; Yapa 1979, 1982, 1990). According to Mellor (1988: 8), "(i)n developing countries, environmental problems and poverty are inseparable." Traditional farming is generally more sustainable ecologically than are modern-day peasant farming systems, because it includes a rationality of sustainability. Once peasants produce primarily for exchange and cease production strictly to meet family needs, their production is no longer diverse, and sustainable practices are abandoned (Toledo 1990: 53).

Because of land scarcity, due in large part to market-driven land tenure inequities, Latin American peasants increasingly are forced to make their livings on fragile, marginal lands appropriate only for trees and grasses. De Janvry and Garcia (1988) argue that land concentration creates the need for landless or land-poor peasants to work for wages on other farms, a process they call "semi-proletarianization," and a process which ultimately reduces the incentive to use land in a sustainable way or to adopt
sustainable practices. This problem is particularly acute in the hilliest, most rugged areas of Latin America.

Parsons (1976: 121-23) described the transition from forest to pioneer small farms to pasture that has degraded much of the Central American landscape. Unsustainable, wasteful subsistence farming practices in recent decades have led to decreased soil fertility, and peasants reacted in one of two ways: they expanded farming onto still more marginal lands, or they sold their land to cattle ranchers. Both resulted in further land degradation and a strengthened cycle of poverty.

Further threats to sustainable peasant economies and land uses result from various complications in the production process and in the market place. Painter (1987: 165-82) found that impoverishment and environmental destruction in the eastern Bolivian lowlands are linked. Both are "...the products of relations of unequal exchange that are established between a settlement area and the larger society." Peasants often are faced with credit discrimination, unreliable availability of inputs, and unequal access to markets, technical assistance and technological innovations (Soto 1990; Alfaro 1990; Painter 1987). Price fluctuations and programs of economic structural adjustment, which normally call for price ceilings on grain crops, further reduce peasant incentives to adopt sustainable practices, and instead promote
expansion of market-oriented crop production onto marginal, ill-suited lands. As a result, poor agricultural practices and their low yields translate to low income.

These problems are illuminating for Hojancha, because sustainable forestry and agriculture can only work on the fragile lands there if they meet the economic and social needs of the small-scale producers (Yapa 1979, 1990).

In short, peasant farming strategies are formulated and carried out not only within the framework of overarching economic, social and political forces, but occur within varying (and often dynamic) environmental settings. Peasants attempt to simultaneously achieve upward social mobility and long-term security (Popkin 1979; Barlett 1982; Reinhardt 1988; Llambi 1988). Success depends upon the maintenance of productive resources (i.e., soils.) The latter, in turn, depends upon the peasant's ability to "make ends meet," to avoid a situation in which declining terms of trade outstrip the ability to increase yields in a sustainable fashion.

Peasant Persistence, Peasant Markets and the Political Economy of Hojancha

An important area in which Marxian and Chayanovian theories of peasant societies and economies differ is the question of social class formation. To Marxists, social class differentiation occurs within the peasant category. Some peasants exhibit upward mobility and become small-
scale capitalist farmers, while others "disappear" as farm operators and become wage labor. Marxists view classes first in productive terms (i.e., the relationship of a given class to the means of production) and later in terms of their revolutionary potential. Theoretical descendents of the Russian agricultural economist, Alexander Chayanov, view peasants as individuals, emphasizing persistence and consumption at the family level. They have little regard for social differentiation within the peasantry, but a strong regard for subordination of the peasantry to other sectors of society. Individual peasant families initiate changes only to meet their consumption requirements, or to simply persist (Brass 1991).

Peasant persistence, or the maintenance of the smallholder productive farm unit in the face of increasing penetration of capitalist development, is a topic of considerable debate among Chayanovian and Marxian social scientists. Chayanovian scholars argue that persistence is commonplace, given the nature of peasant production. Most Marxists argue that peasant disappearance is the more likely outcome (Reinhardt 1988: 17-18; Llambi 1988: 351).

According to the Chayanovian position, the peasant family unit is simultaneously a unit of production and consumption, whose main objective is to meet its consumption needs and its outside obligations, such as taxes and rent. As such, it constitutes a separate "mode
of production" that functions in much the same way under capitalism, feudalism, or socialism. It, therefore, can maintain itself within a broad range of social contexts, regardless of the dominant mode of production (Shanin 1973: 67, 78; Brass 1991: 175). Because family members provide a major portion, if not all, of the peasant farm unit's labor, wage obligations are less of a problem to the peasant unit than to a capitalist farm unit. If prices received for crops are lower due to competition, the family members have only to work harder to increase output to make up for the loss in revenue (Lehmann 1986: 603). Peasants persist, then, because they ultimately can produce agricultural commodities more cheaply than capitalist farm units, which face wage obligations. Various levelling mechanisms, such as the partitioning of landholdings through inheritance, adverse weather conditions, and control by outsiders over markets and credit, serve to keep the peasant family unit from achieving upward social mobility or accumulating capital (Shanin 1973: 71).

According to the classical Marxian position, such as that elaborated by de Janvry (1981: 106-109, 121, 172-173), the smallest family farm productive unit cannot effectively compete with capitalist farms, because the latter possess the economies of scale to drive per-unit production costs down. Accordingly, this forces the smallest peasant productive units out of business. Furthermore, the larger,
more successful peasant enterprises will benefit at the expense of their less fortunate neighbors, and will themselves become small-scale capitalist farms. In short, the peasant eventually becomes either laborer or capitalist.

Empirical evidence suggests that both the persistence and non-persistence points of view have applicability to the Hojancha case. As explained in subsequent chapters, much of the peasantry was unable to persist once cattle production became the dominant economic activity by the 1960s. Many families lost their land and were forced to emigrate from the region or work as wage labor. Other peasant farm units have persisted through coffee production and forestry. Still others have achieved upward mobility, becoming small-scale capitalist, through coffee or tree seedling production. Ironically, tree seedling production has not worked to the benefit of all Hojanchan peasants participating in that activity. Instability in seedling markets has forced some smallholders to abandon the activity, and revert to earning off-farm wages for their livelihood.

Within political economy studies, the role of markets of peasant products is a topic of great debate. Typically, markets and marketing are not the central themes in Marxian or Chayanovian analyses of the peasant economy (Ellis 1983: 214). Within Chayanovian approaches, markets are
subordinate to consumption behaviors on the part of peasants. In Marxian works, the category "production" generally subsumes market relations involving non-labor commodities. Orthodox Marxists have criticized adherents of Dependency Theory and other neo-Marxists who emphasize circulation (market and exchange relations) over productive relations. Such an emphasis, argue the classical Marxists, over-emphasizes external factors, thereby obscuring internal class configurations (Kay 1989).

In a singular neo-Marxian analysis of agricultural exchange relations, Bharadwaj (1985) points out that market relations have had differing impacts upon different strata within the social hierarchy of Third World farm families. Prices, and non-price factors such as personal dominance and power, permit exchange relations to enhance the positions of some families while pauperizing others. In such markets "...there are dominant parties...who set the pattern as well as the terms and conditions of exchange" (Bharadwaj 1985: 11). Tax obligation and commoditization of land reinforce these patterns by binding peasants to market-oriented production.

In his study of campesino (peasant) settlement toward the western end of the Valle Central of Costa Rica and beyond, from the latter nineteenth to mid-twentieth centuries, Samper (1990) demonstrates how market, exchange, and credit relations were of paramount importance in the
formation and maintenance of an "historically specific concept of agrarian capitalism." Merchant elites controlled the credit and processing ends of the coffee industry, but promoted a continuation of campesino control of land and of the production of the coffee bean itself. This latter strategy enabled elites to dominate marketing and credit without having to compete with a landed, coffee-growing elite for control of these functions. Thus, within this specific Costa Rican process of agrarian capitalism was a particular set of social relations based on elites' marketing of campesino-produced commodities and control over the credit peasants relied on.

Similar to Samper, Carol Smith (1977) takes a neo-Marxian stance on the importance of markets to socioeconomic structures affecting peasants. Not only have peasants been drawn into the global capitalist economy, but they are dependent upon it. Market mechanisms affect peasants differently; some benefit, while other lose ground (literally and figuratively.) It is the type of markets, rather than the degree of market integration, that explains differences in peasants' economic experiences and their economic behavior: a well articulated market with multiple outlets for peasant-produced commodities will result in greater ability to overcome terms of trade problems, which typically disfavor peasants.
Smith (1977: 144) further argues against the orthodox Marxian over-emphasis on productive relations and de-emphasis of markets:

Marketing systems are more than reflections of the organization of production; they also constrain the organization of production by promoting differences in the way that commodities and factors of production are priced and allocated.

By factors of production, she means land, labor and capital. Thus, commodity markets are an important component of the social relations of production. In any market, "... the terms of trade will always favor the one who can wait or find other exchange parties. ..." (C. Smith 1977: 118). Those with such options are the ones who determine market price. A peasant producing a perishable commodity in place of subsistence products realizes no value from the product of his labor until he rids himself of it in the marketplace (Gudeman 1978: 121-22). In effect, the peasant producing for market has lost most of his control over the productive means.

Gudeman (1978: 28) further argues that the unequal terms of trade which peasants inevitably face means that prices for goods they purchase (many of which they formerly produced on the farm before participating so heavily in the market) increase faster than prices for the goods they produce for sale. Painter (1987: 165-66, 174, 178-82) links such flaws in market mechanisms to the peasant's need for expansion of crop production onto fragile lands, and
hence to land degradation. These phenomena place exchange relations squarely within the structure. Gudeman reiterates, however, that the initial distribution of the factors of production condition exchange relations; he does not argue for the primacy of exchange relations.

In the critical chorology of the Hojanchan study area, an explicit focus on markets arguably stands to enhance both Marxian and neo-Chayanovian analyses, since market relations are an important mechanism by which the region’s social relations of production are reinforced (a Marxian concept), and the means by which the contemporary campesino family maintains its consumption behavior (a Chayanovian concept). By focusing on markets in subsequent chapters, I place my analysis squarely between the two approaches. For example, the marketing of tree seedlings, characterized by falling prices and market saturation, underlies Hojancha’s contemporary social class formation. At the same time, such markets influence the prospects for campesino persistence in the region.

**Critical Chorology and the Role of the State**

At the heart of the contemporary socioeconomic trends which befall the campesinos of Costa Rica are the economic policies of the state. The state carries out a range of taxation, pricing, investment, credit, and other fiscal policies which, in addition to market forces, influence the production decisions of campesinos. The state’s
development policies from the late 1940s through the 1960s exhibited the typical Latin American pattern of reliance on exports of primary goods to finance imported technology and capital goods for urban industrialization (del Aguila 1982: 370). Import substitution policies involving high tariffs on imported consumer goods intensified in the 1960s, and have largely been maintained to the present (Rottenberg 1993: 134-136). Subsequently, exports of coffee and bananas have been a cornerstone of Costa Rica’s neo-liberal development strategies (Gayle 1986: 87-91; IDB 1988: 388). Another cornerstone has been the Programa de Ajuste Estructural (PAE), or structural adjustment, a strategy designed to control inflation and reduce the cost of labor, to make the export sector more competitive in the world market (Alfaro 1990: 97-100; Soto 1990: 235). The continuation, albeit in modified form, of import substitution strategies along with the strengthened neo-liberal posture of the state (Gayle 1986: 81-85), is an ironic feature of Costa Rican development policy, and one which exemplifies the country’s contemporary exceptionalism.

The neo-Marxian theory of the state described by R. J. Johnston (1984) is appropriate for critical chorology, because it is framed within the perspective of modes of production in capitalist societies. Johnston (1984: 480-482) argues that "(t)he state exists because such an
institution is necessary for the continued existence of the mode of production." The state both legitimates and promotes capital accumulation. It must be separated from the capitalist mode of production, yet allied to it in its role of regulator. Faced with constant crises of legitimation, the state may favor the interests of one sector (such as the urban-industrial or agro-export sector) over another (such as the domestic peasant food crop sector), "because it has to reconcile different interpretations of how the economic system should be structured" (Johnston 1984: 482).

In its execution of the PAE, the Costa Rican state is the mediator of a tension between the interests of agricultural producers and those of labor (Soto 1990: 235). By allocating public resources among the different social groups, the state practices regional planning as these allocations take on a spatial (regional) component. Pricing, fiscal, and finance policies are selectively implemented, creating a hierarchy of "winners and losers" (Alfaro 1990: 97-99). Traditionally, this favoritism has been directed at export agriculture rather than domestic food crops (Gayle 1986: 81). For example, PAE has called for elimination of price supports for basic grains, and reductions in state-sponsored technical assistance to small farmers (Alfaro 1990: 100-101). These trends have made the competition for scarce state resources among subnational
campesino-dominated regions all the more acute. Such competition is an important component of the politics of place of Hojancha and other such regions.

**Summary: Critical Chorology and Hojancha**

The approach of critical chorology combines a regard for uniqueness of place, a trait of the traditional chorology associated with Hartshorne (1939), Sauer (1925, 1941), and many of their academic descendents, with a regard for the workings of the global economy and its inherent social and power structures. In its approach, critical chorology goes beyond most studies exemplifying the new regional geography by including more fully the ecological aspects and culture history of a given region. Because it is more deeply concerned with human-environment interactions, such as agricultural activities, than most studies using the new regional geography approach, critical chorology is arguably a better-suited approach to studies of rural Third World region formation, regional identity and regional processes in general.

Likewise, critical chorology advocates a more explicit focus on the "politics of place," that is, the arena of intra- and inter-regional political competition which underlies region formation and regional identity, than do most examples of political ecology. The latter in most cases provide impressive insight into the interrelationships between, on the one hand, human-
environment interactions, and, on the other hand, the forces and structures associated with the global political economy. With few exceptions, however, political ecology tends not to include regional theory itself, that is, epistemological concerns for the processes of region formation, regional identity, and the spatial delineations corresponding to political economy/ecology interrelations. In short, while political ecology is concerned with process and interrelationships, critical chorology shares these concerns, but especially as they affect, and originate out of, differentiated regions.

Hojancha is particularly well suited to a study using the critical chorology approach as elaborated in this work. It is a region well defined by virtue of the structure-agency interactions which are key to its regional identity. The changing characteristics of Hojancha peasant farming and the changing landscape are embedded in a historically contingent multi-layered matrix of changing market conditions for peasant products and labor, political policies and actions at different scales, and reconfigurations in the capital accumulation process.

Local agency adapts to and modifies these structures. The economically and ecologically turbulent recent past has been reversed in part by a strong community spirit dedicated to preserving the small family farm. The basis of this reversal of fortunes is the foresight and actions
of such agents as agricultural and forestry extension personnel and the skillful political maneuverings of the Catholic priest. The political arena within which structure and agency come together in Hojancha holds a commanding place in the study area's regional character. Hojancha's political party affiliation, atypical by Guanacastecan and Costa Rican standards, and its functioning within the region, is elaborated in Chapter Eight.

Thus, Hojancha's chorologic construction is clear in two basic ways. First, Hojancha is a distinct region dominated by campesino producers and other small farmers of predominantly European ancestry, as opposed to the mestizo ethnicity dominant elsewhere in Guanacaste. They actively seek to maintain their independent productive relations, free of the proletarianization and land concentration so historically typical of Guanacaste's livestock-dominated economic geography. Second, Hojancha is a campesino stronghold community actively pursuing forestry as a means of counteracting the degradation of its landscapes, which has accompanied the region's historically specific process of agrarian capitalism in the twentieth century. In both cases, agency and structure, occurring at multiple scales, are dialectically intertwined to give rise to a unique place which plays its distinct part in the global division of labor.
Finally, the Hojanchan study region has a strong sense of community that is common in local discourse. It clearly functions as a region in the minds of its inhabitants, and other Costa Ricans familiar with it. The region and its particular set of ecological opportunities and constraints and particular historically contingent political economic and social processes at work, is further delineated as a distinct region by virtue of its people and their particular individual and group actions in responding to the challenges they face.

Notes

1 Examples include Jarosz (1993); Wilson Salinas (1983); Barkin (1983); Howitt (1992); Samper (1990); and Zimmerer (1991). The latter two are not explicitly presented as "the new regional geography," but share many of it preoccupations and assumptions.

2 Exceptions include Sheridan’s (1988) study of the political ecology of a Sonoran peasant community, and Zimmerer’s (1991) study of the political ecology of a highland Peruvian peasant community.
CHAPTER THREE

THE STUDY AREA: PHYSICAL ENVIRONMENT AND HISTORICAL GEOGRAPHY TO 1900

In one of the key Berkeley School studies of a region in the developing world, Wagner (1958) effectively illustrated how the Nicoya Peninsula was then distinguishable in many ways from the rest of Costa Rica. First, the biophysical environment is distinctive. For example, geologically, the region is older than the rest of Costa Rica. But it is in its human population that this quality is most notable. It was the first area of Costa Rica to be settled by the Spaniards, and had the largest concentration of Amerinds of any region of Costa Rica at the time of conquest. Whereas people of Spanish descent are culturally dominant in Costa Rica as a whole, Nicoyans are by and large mestizos, or a mixture of indigenous and European ancestry. To a lesser but noteworthy extent, many can be identified as fitting the categories of mulato or "zambo," reflecting African influences. Despite its long settlement history, the Nicoya Peninsula, and especially the mountainous central region where Hojancha is located, remained largely isolated from more "developed" parts of Costa Rica until the 1960s, a decade after Wagner completed his study. At the time of Wagner's study, the cattle industry dominated Nicoya's economy, as it had much of northwestern Costa Rica since colonial times. This was in
marked contrast to the rest of the country. Since then, cattle raising has come to represent a much larger focus of Costa Rica's economic concerns. Nicoya, like many currently peripheral regions in Latin American countries, exhibits an historical trajectory that combines episodes of precocity with longer lapses into marginality.

The unique features of the Hojanchan and Nicoyan physical geography, indigenous history, and European-based settlement and economic histories form the foundations for the most recent regional processes and the regional identity that are central to this dissertation. This chapter provides an overview of the human-environmental "structuration," or mutual influences, underlying Hojancha's contemporary chorologic construction. In this and subsequent chapters, I will argue that these unique historical and physical facets of the region strongly condition the nature of the choices to be made by Hojanchans as they respond to and attempt to influence the structures of their social existence; these facets pose obstacles to overcome and opportunities to pursue.

The Physical Geography, Climate, Flora, and Fauna of the Nicoya Peninsula

The Nicoya Peninsula is bounded on the west and south by the Pacific Ocean, on the east by the Gulf of Nicoya, and on the north and northeast by the Tempisque River and connected bluffs that reach the coast (Fig. 3-1). It is
FIGURE 3-1
NICOYA PENINSULA
composed of Costa Rica's oldest geologic materials (Hall 1985: 3), and forms part of Costa Rica's old External Arc, or Nicoya Complex (Brown 1992: 1; Ribier, et.al. 1986: 9-10). Its old granitic rocks have been separated from the rest of the Costa Rican mainland by a fault system, trending northwest-to-southeast (West 1964: 80). The peninsula's exposed igneous intrusions and marine sediments suggest that it was once part of a chain of volcanic islands lying close to the Pacific coast of mainland Costa Rica. It was originally formed beneath the sea during the upper Cretaceous. Sedimentation subsequently contributed additional mass to the volcanic rocks (Hall 1985: 3), and the peninsula was formed out of a (still ongoing) process of uplifting (Stone 1977: 12; Urena 1965: 64). Today, the peninsula's west side is slowly rising relative to its east side. The Gulf of Nicoya is a tectonic depression whose northern portion has been filled in by sedimentation, now occupied by the Tempisque River Valley, the northern and northeastern boundary of the peninsula (Wagner 1958: iii; Ureña 1965: 64).

The peninsula, roughly 110 kms. long by 15-40 kms. wide, contains great physical diversity in a small area. Wide, flat plains flank the gulf and Tempisque Valley sides. Folding has produced a rugged, hilly central portion of the peninsula (Sandner 1962: 121). Coastal plains along the Pacific side are narrow-to-nonexistent.
Even the peninsula's climate is marked by variability. Towards the northern end, the typical Guanacastecan dry conditions prevail. Rainfall increases markedly from north to south, from some 2,000 millimeters annually in the north to 3,000 at the southern tip (Sandner 1962: 122). Vegetation ranges from almost purely deciduous in the north to almost purely evergreen toward the south (Wagner 1958: 203).

The Nicoya Peninsula can be subdivided into three physical geographic regions (Wagner 1958: 196-7). First, the broad coastal plain of the Gulf of Nicoya and the plain of the Tempisque Valley are composed of limestone and quaternary sedimentary deposits. This broad region encompasses approximately one-third of the Nicoya Peninsula. Quaternary sands, marine alluvium and gravels are the dominant materials (West 1964: 39). The landscape is dotted with occasional limestone hills, many of which are isolated, conspicuously rising out of otherwise level plains. These hills are generally elongated and trend northwest-to-southeast (Sandner 1959: 30). The immediate gulf coast is marked by river and stream deltas, marshes, and mangrove swamps. A second region is that of the Pacific coastal littoral of the southern and western sides of the peninsula. It is composed primarily of sedimentary features. Sandy beaches are narrow, and are flanked by steep bluffs in many parts. Estuaries are formed where
streams enter the Pacific (Wagner 1958: 196-7). Steep, rugged, but low hills extend close to these shoreline features.

The third physical geographic region is characterized by igneous and metamorphic materials (schists, gneiss, granites), most of which have been folded, faulted and eroded (West 1964: 39; Wagner 1958: 196-7; Hall 1985: 10-11). The Hojancha study area is located in this hilly and mountainous central region, which rises abruptly out of the flat lands to the north (Sandner 1962: 121). The region comprises about half of the peninsula. Though reaching 1,000 meters in only one point (Cerro Azul, 1,018 meters), these small mountains are steep, and separated in many cases by narrow, deep gullies and numerous stream valleys. In these northwest-to-southeast-trending ranges are found remnants of old "altiplanos," or high mountain plains, in the 300-350 meter and 500-600 meter elevation ranges. These indicate occurrences of different phases of geomorphologic development (Sandner 1959: 30).

Four of the dominant ranges of the Nicoya Peninsula's mountainous spine converge within, or in the immediate vicinity of, the canton of Hojancha. These include the Cerros de San Blas, Cerros de Dulce Nombre, Cerros de Nosara, and Cerros de las Huacas. The latter three are eastward and southeastward branches of the San Blas; the latter two are separated from the first two by the Rio
Nosara, the dominant river of the peninsula's interior (Secretaría de Gobernación 1924: 50, 95). All these mountains can be best described as "rough," or "wild like" (Wagner 1958: 197-9). Human settlement, therefore, tends to be most heavily concentrated in the altiplanos and stream valleys.

The climate of the peninsula exhibits a noteworthy transition from north to south. The average annual temperature in the drier plains of the northern portion of the peninsula is 28 degrees (centigrade), compared to 23 degrees in the higher peaks farther south. The smaller rainfall amount in the northern plains and northern portion of the mountainous zone coincides with the longer dry season, late November to early May (Sandner 1962: 122). The southern and southwestern coast receive some 50 percent more rain annually than the dry northern plains, and the dry season is reduced to three or four months (Wagner 1964: 246).

The first weeks of the dry season, mid-November through December, represent the coolest time of year, due to strong north winds and clear nights. The end of the dry season is the hottest time of year, with average temperatures 5 or 6 degrees centigrade above those of late November. By May, the highly variable rainy season begins. A short dry spell, or "veranillo," can last two weeks or more, usually starting sometime in July. In August, the
rains return and fall nearly every day. Everywhere on the peninsula, the month of October is the wettest, usually with more than twice the precipitation of the entire dry season (Sandner 1962: 122; Wagner 1964: 246).

The rainy season provides an important source of water for the peninsula's streams and rivers. Compared to the rest of Guanacaste, however, the peninsula's streams generally contain more water year-round, and are more numerous on a per-square-kilometer basis (Secretaría de Gobernación 1924: 95). The Rio Nosara, the widest and most voluminous of the interior peninsular rivers, originates within the Hojancha study area, in the Cerros de las Huacas, and provides Hojancha's farmers and other residents a year-round water resource. The Rios Perros and Zapotal, tributaries of the peninsula's second major river, the Rio Ora, also provide Hojancha with water resources, especially irrigation for crops.

Natural vegetation is varied throughout the peninsula. Toward the north, where conditions are flatter and hotter, and the dry season is longer, low (i.e., 20 meters or less) deciduous trees in "scrubby assortments" are dominant (Wagner 1964: 246). These include guanacaste (Enterolobium), pochote (Bombacopsis), Guazuma, Cordia, tropical cedar (Cedrela), and other species of the tropical dry forest category. The central mountainous zone, including Hojancha, contains premontane humid forest above
500 meters, and tropical humid forest below 500 meters and near the coast (Campos, Rodríguez, Ugalde 1993: 6; Stone 1977: 13-14). In this zone, both deciduous and evergreen trees can be found (Stone 1977: 13-14).

In addition to guanacaste and pochote, the dominant upper story tree species are cedar (Meliaceae), narzareno (Peltogyne), Chrysophyllum, Terminalia, Chlorophora, and Cedrela. The lower story contains such species as guava (Psidium), custard-apple (Annona), and Acacia (Wagner 1964: 246). The upper of the two tree stories reaches some 20 meters in height. Southwestward from the central mountains, the forests are less deciduous, and closer in character to tropical rainforest. That is, they are seasonal evergreen forests, and contain three stories, the highest of which is closed canopy and reaches 30 meters. Dominant species include mahogany (Swietenia), tropical cedar, pochote, sapote (Pachira), and laurels (Cordia and Nectandra). Epiphytes are more common in this zone of Nicoya with higher rainfall than the other zones (Wagner 1964: 246). In the plains and central mountains, stream beds contain the evergreen forest type with epiphytes characteristic of the south and southwest coastal portions of the peninsula (Sandner 1962: 122).

It is worth noting that much of the Nicoyan landscape, and especially the flatter areas, have been cleared of natural forest cover. Natural, undisturbed forest tends to
be isolated to slopes and stream beds. Hillslopes, many of which exceed 30 percent, are by no means uniformly zones of non-disturbance (Ribier, et.al. 1986: 9-10). The numerous abandoned fields and pastures of the peninsula contain secondary regrowth, ranging from weeds and brush to clumps of single species trees with brush and weeds, to forests which are almost developed to original multi-layered conditions (Wagner 1958: 203-4). Species with fire-resistant seeds, or easily-dispersed seeds, prevail, such as guanacaste, pochote, and tropical cedar, indicating fire has had a lasting impact on Nicoya’s vegetation. Wagner (1964: 246-7) speculates that such human disturbance may have had an even greater impact in colonial times than in the twentieth century.

As is the case with Nicoya’s flora, its fauna portrays the region’s place in the "landbridge" between North and South America. Just as Nicoya’s flora originated from both continents, so too have the region’s animal species (Janzen 1983). Rodents, bats, monkeys and marsupials related to South American species are dominant. At the same time, the Nicoya Peninsula represents the southward limit of such northern animals as shrews and coyotes (Wagner 1958: 204). White-faced monkeys, howler monkeys, tapirs, white-tailed deer, iguanas, green parakeets, macaws, and parrots, all of South American origin, coexist in the peninsula with wild turkeys, quail, and dove from the north (Stone 1977: 14).
THE HOJANCHA STUDY REGION AND ITS VARIABLE PHYSICAL CHARACTER

The study region corresponds roughly to the northern half of the canton of Hojancha, the smallest of provincial Guanacaste's 11 cantones, and contains an estimated 80 percent of the canton's population of nearly 6,000 (Comunidades 1990: 3). The study region's longest east-west dimension is approximately 16 kms., and its longest north-south dimension is approximately 13 kms., producing a territory of approximately 132 square kms. (Fig. 3-2). The 261.4 square-km. canton is delineated by a number of physical features. The Blanco, Perros, and Ora rivers form most of the canton's long eastern and southeastern boundary. The Pacific coast serves as the canton's short southern boundary. The long western boundary is formed by the highest points of a series of ridges of the Cerros de Tabaco and San Juan Bosco of the San Blas system, and, therefore, coincides with a natural watershed boundary. The northern cantonal boundary is the Rio Momollejo. Thus, the political boundaries of the canton coincide as much with physical features as with the spatial extent of historical settlement.

The study region is delineated culturally as well as physically. Its population is much more of Valle Central origins than surrounding regions of the Nicoya Peninsula, with the exception of the higher zones of neighboring
Nandayure Canton to the east. The study region's northern, eastern and western boundaries are the same as those of the canton. The boundary zone which separates the study region, the more heavily populated northern half of the canton, from the rest of the canton is a series of steep hills and small mountains, rugged and only sparsely settled, that trend from just south of San Rafael roughly eastward to just south of Monte Romo. Southward of this boundary is a peripheral, largely empty zone with only a small number of sparsely populated mestizo settlements on or near the coast. These are more economically and culturally tied to Puerto Carrillo than to the study region. Farmers and laborers of the northern half of the canton have surprisingly few economic connections with Puerto Carrillo.

Despite its small size, the study region is marked by diversity in its physical, ethnic, and economic landscapes. The largely mountainous and hilly region contains four altiplanos that are important in its settlement geography. The dominant plain is that surrounding the region's largest town, Hojancha. The "Plain of Hojancha" is a crescent-shaped meseta, or mesa, extending from the cantonal boundary due west of the town of Hojancha, to east of the town, and southeastward to the small community of Pilangosta. Steep mountains with peaks of over 500 to nearly 900 meters surround the plain to the south and
southeast. Among the hamlets in the plain are Libertad, San Gerardo, Cuesta Blanca, and Arena. The Rio Nosara and numerous small tributaries flow through this plain, lying between 300 and 350 meters in elevation. Throughout most of the twentieth century, pastures have been the dominant landscape feature of the plain, though in recent years, nurseries producing tree seedlings have sprung up throughout. As Sandner (1959: 38) noted, the predominance of cattle culture and lack of intensive food crop or coffee production has translated historically to fewer isolated farmsteads than in other frontier localities of Costa Rica settled by Whites.

The north side of the Plain of Hojancha is separated by a mountain range, 500 to 580 meters high, from the plain of Matambú, 300 to 350 meters in elevation. This plain is the site of Guanacaste's only indigenous reserve. Though these "Indians" are for the most part mestizos, they have conserved many of their traditional customs, such as the maintenance of household gardens producing a variety of fruits, vegetables, and tuber crops. Matambú was made into a reserve to halt the process of "Cartagos" (persons of European ancestry from the Valle Central) from acquiring Indian lands through questionable business dealings (Comunidades 1990: 13). Matambú contains the most heavily populated farming settlement in the study region. Tiny farms, or minifundias, too small to sustain a family on a
full-time basis, predominate. Even in the 1950s, Sandner (1959: 39) noted a high incidence of migration of youth to the banana and other zones of Costa Rica to earn wages, a pattern which continues today. Matambú is an obvious peripheral locality within the study region.

At San Rafael, in the southwestern portion of the study region, is a small altiplano of some 400-450 meters, surrounded by steep mountains of 600-800 meters. Cattle culture dominates the San Rafael plain, though small- and medium-sized dispersed farms growing food crops in addition to cattle are found in greater proportions than in the Plain of Hojancha. A fourth altiplano is occupied by Huacas, a community of mostly small farms and intensive agriculture. This plain is at sufficient altitude, 500-600 meters, for intensive coffee production. The slightly higher elevation of this plain and its cooler climate have made it a preferred settlement locality, first by Amerinds, who left burial sites there, and later by some of the earliest of the pioneers from the Valle Central wishing to transplant their coffee culture to the Nicoyan frontier. After several successful decades of living and working in that relatively remote altiplano, the people of Huacas, now numbering some 525 (Comunidades 1990: 17), have developed a strong sense of community.

Within the study region, there are three communities located in more mountainous, rugged terrains rather than
altiplanos. These are Pita Rayada (550 meters), Maravilla (620 meters), and Monte Romo (700 meters). In all three, small-farm coffee culture is dominant, followed by commercial production of vegetables and subsistence production of grains. Cattle grazing is less intensive than in the altiplanos of the study region, since most pastures occupy steep slopes.

Overall, the landscapes of the Hojancha study region, altiplanos and mountain slopes alike, are largely deforested and contain poorly developed soils. Soils are largely shallow and clayey (Ribier, et.al. 1986), and classified as brown and red Ustic Dystropeh latosols. Because of severe slope, some 35 percent of the region's soils are appropriate only for forest and unsuitable even for livestock (Campos, Rodríguez, Ugalde 1993: 5). The recent efforts at reforestation, though impressive, have not yet begun to rival pasture as a land use.

Reforestation is more common on lower, flatter lands of the region, due primarily to the agroecologic character of the tree species planted there. Seedling production is limited to flat lands below 500 meters, and is, therefore, found for the most part in the Hojancha Plain and to a lesser extent in other lower altiplanos. As farmer confidence in forestry increases, that activity is slowly diffusing from the Hojancha Plain to the rest of the study area. Though forestry is a major component of Hojancha's contemporary
regionalization, it is not the only one. Subsequent sections of this study will outline the various historical and contemporary processes underlying Hojanchan regional structuration, linking such diverse localities as impoverished Matambu and "middle class" Huacas in a common effort of regional upward social mobility.

The Pre-Columbian History of the Nicoya Peninsula

The Nicoya Peninsula represents the southernmost region occupied by Mesoamerican High Cultures at the time of the Spanish Conquest (Wagner 1958: 205; MacLeod 1973). The Chorotega were the peoples the Spaniards encountered when they explored the region. These were the most advanced of the indigenous groups of Costa Rica (Ureña 1965: 64). The Chorotega were relatively recent arrivals to Nicoya. The peninsula had been occupied and visited by peoples as far back as several millennia. The burial site at Huacas, excavated at the turn of the twentieth century, contained arrowheads and other artifacts stylistically similar to those dating back to 9250 B.C. in North America, suggesting passage of pre-Columbian humans from North to South America (Stone 1977: 26-29).

In numerous parts of the peninsula, archeologists have encountered pottery types commonly found in Chiapas, Guatemala, Ecuador, and even Guyana dating as far back as 1500 B.C., suggesting to Stone (1977: 29-43) that there was significant contact between Nicoyans and peoples of distant
regions, such as the Mayas and merchants of Mexico's and South America's west coasts. Lange, et.al. (1992: xviii, 275-276), however, doubt that trade between Nicoya and these areas was heavy. They suggest instead that pottery ideas, as opposed to the pottery itself, diffused from Mayan and South American source regions to Nicoya, and that the Nicoyans themselves manufactured the pottery of these types.

The pre-Chorotegan Amerinds of Nicoya relied heavily on fishing, the gathering of nuts, seeds and fruits, and the hunting of fowl, rodents, deer and monkeys. Agriculture was not yet extensive, but included tuber crops such as yams (Dioscorea sp.), yuca (Manihot sp.) and tiguisque (Xanthosoma violaceum), all of which were well adapted to the region's distinct wet and dry seasons (Wagner 1958). Housing was constructed of perishable materials, including vines, cane and palm leaves. In the period 300 B.C. to 300 A.D., Nicoyans used stone tools and jade pendants, of both northern and southern origins. Their stratified society was ruled by chieftains (Stanislawski 1983: 3; Stone 1977: 29-43). Trade networks included the use of rafts with triangular-shaped sails, and possibly canoes holding up to 60 people, travelling between the Ecuadorean and southwest Mexican Pacific coasts (West 1961). The natural protection which the Gulf of Nicoya offered sea-bound traders is believed to be a major reason
for the involvement of Nicoyans in the wide-spanning trade network (Stone 1977: 29-43).

After 300 A.D., a time when the Nicoyan population increased, trade with the Maya became more pronounced. Classic Maya jade pendants of the period 300-800 A.D. have been found at Huacas. Other items found in Nicoya suggesting a strong Maya trade connection in the period include ceremonial pottery of "Nahuatized Maya theology," suggesting the adoption in Nicoya of Maya religious concepts (Stone 1977: 58-60).

The Chorotegas settled the Nicoya Peninsula in the period 1200-1500 A.D. (Stone 1977: 78-79). Originally from Chiapas (Secretaría de Gobernación 1924: 220), but not of Nahuat origins, they succeeded in driving the Corobicí, an egalitarian peoples of South American origins, out of Nicoya (Stone 1977: 78-79, 92). The Chorotegan territory extended northward from their Nicoyan hearth to the Lago de Nicaragua. With the possible exception of Huacas, very few people lived in the peninsula's southern or central mountainous zones (Comunidades 1990: 4; Secretaría de Gobernación 1924: 224; Wagner 1962: 123). Their numbers had probably reached 65,000 or more by the time of the first Spanish exploration of the peninsula, 1522-23 (Newson 1987: 336). The Chorotegas, the most advanced indigenous group in all of Costa Rica, faced fewer natural obstacles to trade than peoples elsewhere in Costa Rica. They had
created roads or trails for use in trade and as war paths (Nunley 1960: 10-11; Mora, et.al. 1986: 9-10). Their capital city, which they called Nicoya, and which is east of the present-day city of Nicoya, was the largest of eight or nine villages in which most Chorotegas lived (Nunley 1960: 10; Secretaría de Gobernación 1924: 224-225). This largest Chorotegan settlement of the peninsula likely exceeded a population of 20,000 (Sibaja 1982: 24).

In addition to hunting, gathering and fishing, the Chorotegas practiced rather intensive agriculture in some areas. They produced maize, beans, and squash in a system based on forest regeneration (Mora et.al. 1986: 9). They grew a surplus of maize for trade. Adjacent to the larger settlements, maize was irrigated and weeded. Tortillas were important in the Chorotegan diet. They produced cotton and cloth for trade, and cacao for money and for a beverage. They raised the stingless bee for honey, and this was traded as well (Stone 1977: 85-86). The zapote and nispero (medlar) were two fruits important in trade (Secretaría de Gobernación 1924: 107). Chorotegan crops used locally included tobacco and such fruits as papayas, plums, and avocados. They chewed coca leaves to alleviate pain and thirst (Stanislawski 1983: 4-5; Stone 1977: 85-86). Yuca, beans, turkeys, and dogs rounded out the diet. Agricultural technology included slashing, burning, the digging stick, and tools made of stone and shell (Wagner
According to Mora, et.al. (1986: 10-15), the swidden agricultural system of the Chorotega included a long rotation cycle of approximately 40 years per plot of land, or two years of crop production and the remaining years in fallow. They favored vegetative reproduction of maize, and used the stalk to support squash plants. The broad leaves of the squash plants served to preserve the moisture in the soil. The least advantageous aspect of this sustainable system was the use of fire, which tended to impoverish the soil by destroying grasses and weeds. Stone axes and hoes enabled the Chorotega to fell trees and work the soil with relative ease. In addition to the rotating fields, permanent household gardens produced yuca, plantains, chili peppers, and numerous other fruits and vegetables.

Non-agricultural Chorotegan technologies were highly developed. Their villages each had markets and temples (Nunley 1960: 10). These dwellings and the houses were constructed of wood and thatch. Primitive looms enabled them to fashion cotton cloth for trade. They had stone tools, made clay pottery, did woodworking, and used plant dyes (Wagner 1958: 205). The Spaniards encountered their small boats in the Gulf of Nicoya (Nunley 1960: 11). They had made scientific discoveries in astronomy, and had
developed a calendar (Secretaría de Gobernación 1924: 221). They used gold primarily in jewelry (Stone 1977: 94).

The Chorotegan division of labor was well defined along gender lines. Women tended the markets (which used cacao beans for money), homes and gardens. Men worked the fields, hunted, and waged war (Wagner 1958: 205). Chorotegan society was stratified, and included nobles, commoners, slaves and prisoners of war. Agricultural surpluses had to support two non-farming groups: nobles and a large military. The latter enforced systems of tribute in the feudal society (Mora, et.al. 1986: 16-17). The chief, located in Nicoya, ruled over the entire Chorotegan territory. While commoners’ houses were built at ground level, the rulers’ dwellings, or palaces, were constructed on mounds of approximately a meter high. While nobility was buried in tombs, commoners were cremated (Stone 1977: 90-93).

The Chorotega held festivals for maize, cacao, cotton, and beans. During these festivals, prisoners of war were sacrificed and eaten, a practice which appalled the Spaniards, and, along with the gold, enticed them to conquer the region (Stone 1977: 90-94; Secretaría de Gobernación 1924: 221-223).

The Spanish Conquest and Colonial Nicoyan Economy

It is no accident that the Nicoya Peninsula was the first region of Costa Rica to be conquered by the Spaniards
(Trejos 1937: 334). At least half of the Amerinds of Guanacaste lived on the peninsula. There was, therefore, a concentration of Indians to Christianize. The intensive production of cotton and other crops, and the use of gold by the Chorotega led the Spaniards to believe that Nicoya could produce wealth for the Crown (Nunley 1960: 11). The environment was more accommodating for exploration and penetration than other, wetter, parts of Costa Rica (Secretaría de Gobernación 1924: 107). The Gulf of Nicoya offered several natural harbors. The rest of Costa Rica had little to offer in comparison (Augelli 1987: 2).

The Spaniards first explored the Gulf of Nicoya and the peninsula's gulf coast in 1519, and first explored the peninsula on foot in 1522 (Sibaja and Zelaya 1985: 9-11; Nunley 1960: 11-13). Their excursion took them through the Chorotegan town of Nicoya, where the cacique Nambi and his followers, a total of 10,862 Chorotegas, were baptized by don Diego de Aguero. In 1524, the Chorotegas were assigned to encomiendas, in which the rights to control Indians and their territories were granted by the Crown to the principal conquistadores (Secretaría de Gobernación 1924: 11, 225). The encomienda and its abusive system of forced labor was ineffective in Nicoya. In an effort to restore the Indian population, it was soon replaced by the hacienda system, based on quasi-feudal relations (i.e., peonage) and livestock production (Hall 1985: 41, 98). Many of the
Indians were shipped as slaves from the region to Panama and Peru.

Along with this forced emigration, diseases introduced by the Spaniards, and the overworking of the Chorotegas all contributed to a dramatic decline in the indigenous population of the Nicoya Peninsula. For example, by 1569, the Nicoyan Indian population had diminished to an estimated 3,000, about five percent of the level at the time of initial Spanish contact (Hall 1985: 41; Sandner 1962: 123). Some of the reported abuses under the encomienda system included the overworking of Indian children, and the renting of Indians to third parties, who forced them to carry cargo, and to fell and saw trees in forests for unreasonable lengths of time: The extraction of tribute from the Chorotegas began in 1544, officially marking the end of the slavery of the encomiendas and the beginning of the quasi-feudalism of the haciendas (Mora, et.al. 1986: 26-27).

The Spaniards brought Old World plants and animals to Nicoya, including sugar, citrus, rice, cattle, and horses, not to mention the plow. The old Chorotegan economy was quickly phased out and replaced by a Spanish one, involving cattle raised for hides and fat, horses, mules, pearls, indigo, and commercially produced rope, twine and cotton cloth. Thus, northwestern Costa Rica, with its cattle-based economy which subjugated the native peoples, had a

The colonial venture in the region involved the forceful establishment of mechanisms to guarantee a favorable return on capital invested. In addition to labor, the region supplied the conquerors with food surpluses and wood supplies. The food surpluses, many of which were exported to Panama, were needed to sustain the exportation of livestock-related goods and Indian slaves to other colonies (Mora, et.al. 1986: 25-27, 32; Secretaría de Gobernación 1924: 114-115). In addition to the surpluses produced for the Spanish-controlled trade, the Indians continued, albeit in modified form, their traditional subsistence practices of food production under the hacienda system of tribute (Sandner 1962: 123). They were forced to use Spanish agricultural technologies, and were concentrated by the Spaniards into hacienda settlements, where tribute could be easily collected, and their work could be overseen (Mora, et.al. 1986: 31-32).

By 1550, the trade of Chorotegan slaves had diminished, due to decreased demand by Panama and Peru, and the diminished local supply of Indians. The Spaniards of Nicoya were forced to turn their attention to the production of mules, a product exported for use in the
Panamanian trade routes, and, after 1560, cattle for market-bound hides and tallow. The delay in cattle production in Nicoya coincided with a lack of capital before 1560. Indian laborers slaughtered the cattle. The fat was extracted and sold for the making of candles and the protection of wood on boats. Interestingly, because of the great distance to markets, the meat was too perishable to become an export product from Nicoya in the sixteenth century (Secretaría de Gobernación 1924: 115). The proliferation of the Nicoyan livestock economy was made possible not only by capital, which increased in availability after 1560, but also by the privatization of land which commenced once the hacienda system legally replaced the encomienda in 1542 (Mora, et.al. 1986: 29-32).

Mora, et.al. (1986: 31-38) provide a detailed description of the relationship between the early colonial economy and its land tenure arrangements on the one hand, and environmental degradation on the other hand. Almost immediately after their arrival in Nicoya, the Spaniards began felling trees and grazing livestock in the flatter areas of the east side of the peninsula. As their mercantile economic activities developed, they required a sedentary indigenous population. The Indian communities, lands designated for Indian settlement and production, had been established by the seventeenth century in six localities of the peninsula, including Nandayure in the
central mountainous zone. The communities contained communal forest lands for swidden production of crops for tribute, individual titled minifundias for subsistence food crop production for each Indian family, and communal grazing lands, once the cattle culture was fully developed in the region.

The closer proximity of these Indians to one another immediately caused a reduction in the forest regeneration fallow time associated with their food crop production, and consequently, a reduction in soil fertility. Forest land was continually reduced as pasturage increased in area. Indian swidden subsistence crop production expanded out of necessity to forested lands of marginal quality. The destroyed Indian subsistence agricultural economy was not only unable to assimilate the Spanish-imposed factors of production, but was further marginalized by the competition for land, which favored Spanish mercantile livestock grazing.

By the early seventeenth century, Nicoya began to experience diminished trade with the markets of Panama and the Costa Rican Valle Central. The latter began producing much of its own crop and livestock needs, and supplying Panama with these goods more effectively than the more remote Nicoya Peninsula (Mora, et.al. 1986: 32; Secretaría de Gobernación 1924: 114-115). The northwestern Costa Rican participation in the livestock trade that did
survive, due to the opening of the road to Panama early in the 1600s, was more a phenomenon of northern Guanacaste, rather than remote Nicoya, which had sent livestock to Panama mostly by ship (Mora, et.al. 1986: 39).

By the late seventeenth and early eighteenth centuries, Nicoyan livestock production had diminished even further, due to several factors. Significant land degradation resulted from nearly two centuries of poor management of grazing lands and a reduced carrying capacity of these lands. Prices of livestock products, including dried meat, fell. The cattle slaughter season occurred in August, the same time as the harvest of food crops; fewer hands were available to work in the livestock operations. Competition with other livestock-producing zones in the New World, such as Peru, served to marginalize Nicoyan production. Pirating on the Gulf of Nicoya affected the peninsula's exports of livestock products. Despite these setbacks, Nicoyan cattle production did not disappear entirely, because new markets opened up in the emerging indigo-producing regions northward, such as El Salvador, Guatemala, and Nicaragua (Mora, et.al. 1986: 40-42).

Increased contact between Nicoya and regions to the north opened up markets for live cattle to be driven to Nicaragua for later shipment to Guatemala (Hall 1985: 98).

The demographic changes in the Nicoya Peninsula in the colonial period were dramatic (Table 3-1). From the
earliest stages of Spanish occupation, whites married Indians, producing a mestizo segment of the population. The decline in the Indian population provided the impetus on the part of the Spaniards to relocate African slaves to Nicoya from the Caribbean coast of Costa Rica and Nicaragua, beginning late in the seventeenth century (Secretaría de Gobernación 1924: 231-232; Sandner 1962: 123). The Spaniards brought Africans to Costa Rica’s

<table>
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<th>YEAR</th>
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<td>650</td>
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</table>

Sources: Newson 1987; Secretaría de Gobernación 1924; Nunley 1960; Hall 1985.

Atlantic coast originally as labor for the burgeoning cacao plantations (MacLeod 1973: 333-334; Gudmundson 1986: 2). Once in Nicoya and elsewhere in Guanacaste, Black, mulatto and zambo (Black and Indian mix) immigrants worked on cattle haciendas. In the eighteenth century, many of these laborers of African (and mixed) descent began migrating from crowded cattle haciendas of northern Guanacaste to
lowland zones of the Nicoya Peninsula. This migration had the effect of driving some Indians and mestizos out of the Nicoyan lowlands and into the peninsula's mountains, where land was more productive and plentiful (Sandner 1962: 123-124).

These movements of marginalized Nicoyans were but two examples of peasant farmers of Colonial Nicoya. A small number of mostly mestizo, and in some cases Spanish, pioneers legally obtained land in the Central Nicoyan mountains by squatting peacefully and continuously occupying small parcels for at least ten years. After that time, they could petition the Spanish Crown for legal ownership after paying a fixed sum (Augelli 1987: 4). Because of the lack of labor and the resulting high wages beyond what hacendados (hacienda owners) could afford, a number of small- and medium-scale beef producers emerged in eighteenth century Nicoya. These were potential laborers, mostly mestizos, who chose to establish their own farms. This boom in smaller farms was made possible in part by a new market for land which accompanied the eighteenth century cattle boom. Many of these smallholders initially rented the land from hacendados. To pay for the land, the smallholders also produced sugar cane, basic grains, and other cash crops. Hacendados and cattle dealers frequently offered the smallholders credit to build up their small but intensively-raised herds (Mora, et.al. 1986: 42-52).
Indian peasants, still dependent on haciendas, became more deeply incorporated into the European-controlled capitalist economy in the eighteenth and early nineteenth centuries. As hacendados found it increasingly difficult to penetrate Panamanian markets, they became less interested in crop tributes from peasants, and more interested in monetary tributes. Indian peasants, therefore, had to sell crops for cash, which they produced on the ejidos, the communal lands on the Indian communities. They maintained communal herds of cattle, which enabled them to enter livestock product markets, and earn a reliable source of tribute in some cases. In many other cases, however, the stiff tribute requirements could not be met, and many Indians lost their land, cattle, or both (Mora et.al., 1986: 52-55). Though equally tied into the regional and international capitalist economy, hacendados and Indians of the late colonial period in the Nicoya Peninsula experienced quite different economic and social outcomes. The migration of landless Indian and mestizo peasants to the mountains and other frontier zones of the peninsula, which began late in the colonial period, accelerated after independence.

Costa Rican Independence and Changes in the Nicoyan Economy and Society

Though independence came to Costa Rica September 15, 1821, it was not until 1824 that the country annexed Nicoya
from Nicaragua (Sibaja and Zelaya 1985: 5). A plebiscite that year affirmed the intention of the people of present-day Guanacaste and a part of southern Nicaragua to be part of Costa Rica. The annexation was officially ratified by both countries in 1888, thirty years after an agreement was reached between the two countries that designated the lands of southern Nicaragua to that country (Hall 1985: 56-58).

Shortly after the 1824 annexation, the territory was divided up into cantones and districts. At that time, the Hojancha study region was a portion of the First District, the Villa de Nicoya, of the canton of Nicoya, established in 1837 (Secretaría de Gobernación 1924: 214).

For the Indians of the Nicoya Peninsula, independence from Spain brought an end to the tribute. Almost immediately, the indigenous population began to increase. The demographic and land tenure changes brought about by the end of the tribute were accompanied by a tighter linkage of the Indian communities to markets, and the introduction on these lands of new cash-earning agricultural activities, including rice, coffee, sugar cane, and hogs (Mora et.al. 1986: 57-58). With these market linkages, landlessness and peasant migration to frontier zones of the peninsula accelerated.

The number of small farms in the peninsula increased rapidly throughout the nineteenth century, due in part to frontier pioneer settlement and in part to the selling of
divided Indian lands (Sandner 1962: 124-125). The cattle industry became increasingly lucrative, especially the fattening of Nicaraguan cattle on Nicoyan pastures for eventual driving to the Valle Central (Secretaría de Gobernación 1924: 118). Hacendados participating in this market began evicting peasants from haciendas as they enlarged herds, improved pastures and intensified production. In many cases, land used for peasant subsistence crop production disappeared from haciendas, driving many to search for new places to settle (Gudmundson 1983: 147). In some cases these peasant lands associated with the haciendas were sold or rented, as cattlemen sought new sources of capital. The latter was becoming increasingly scarce, because it was tied up in the emerging coffee boom in the Valle Central (Mora, et.al. 1986: 57).

Gudmundson (1983: 145-147) identifies two main peasant types in northwestern Costa Rica, including the Nicoya Peninsula, in the nineteenth century. The majority through most of the century were of the first type, the remnants of the pre-capitalist peasantry associated with the cattle haciendas. Several decades after independence, most of these Indian and mestizo peasants remained concentrated on and near the cattle estates located around such towns as Nicoya, Liberia and Santa Cruz, and on a few isolated haciendas in the mountainous and lowland peripheries. The second peasant type established small, independent
farmsteads, dispersed throughout the frontier highlands of Guanacaste, including the Nicoyan mountains. These peasants, mostly of European ancestry, were displaced by crowded conditions in the Valle Central coffee zone. Some, however, were mestizos, mulatos and Indians displaced from their traditional hacienda settlements of Guanacaste.

It is this second peasantry type that eventually became the most important in Hojancha's twentieth century historical geography. Fleeing economic insecurity, they migrated and established isolated farmsteads at the frontier. Gudmundson (1983: 146-147) argues these peasants, because of their economic misfortunes and their initiatives to move, were willing to struggle, to effect change, such as acquiring lands through squatting or agrarian reform. The peasants associated with haciendas, on the other hand, were conservative, because they had relatively steady access to land, albeit under harsh social conditions. They desired to maintain the status quo, and often resisted not only the selling of hacienda lands by hacendados, but even agrarian reform efforts that would have put the land in their own hands. As argued in subsequent chapters, the independent migratory peasants that settled present-day Hojancha helped pave the way for the study region to develop its regional identity and small-farm mercantile spirit, unusual by Nicoyan standards.
The highland Nicoyan pioneer settlers were isolated through much of the nineteenth century from the booming markets of the Valle Central coffee region. Independence from Spain gave the smallholders of the Valle Central the opportunity to participate in a lucrative global market, and to transform their subsistence economy into a mercantile one. It was not until transportation improvements, related to coffee, came to the Gulf of Nicoya, and to the peninsula itself, that the Nicoyan highlanders could produce more than a trivial quantity of food crops for the Valle Central market (Nunley 1960: 14-22). In fact, the transportation limitations kept highland Nicoyan settlement at a slow rate until the twentieth century (Augelli 1987: 10; Seligson 1980: 29). As a result, pioneers were of the opinion that land was abundant in the forested central Nicoyan mountains. Their farming practices were wasteful and destructive, because they were based on the belief that where trees were abundant, crops would flourish (Augelli 1987: 9-10).

Slowly, these Nicoyan highlanders began to sell their crop surpluses to merchants who shipped them through the coffee port of Puntarenas, on the mainland side of the Gulf of Nicoya. A road linking the Valle Central to Puntarenas was completed in 1846 to facilitate coffee exports (Seligson 1980: 17; Nunley 1960: 20-22). In 1865, steam-powered boats began commercially shipping agricultural
products from the Nicoya Peninsula across the gulf to Puntarenas (Sandner 1962: 125). Small ports were located at Nicoyan gulf coastal settlements and along the Rio Tempisque in the Guanacaste cattle zone. The economic development of Puntarenas had clear repercussions for the Nicoya Peninsula, including its highland zone, which had previously been forced to rely on a crude road leading from Liberia to the town of Nicoya (Nunley 1960: 20-24).

The presence of maritime shipping routes undoubtedly stimulated the Nicoyan timber export industry during the second half of the nineteenth century. Initially, commercial timber extraction occurred near the peninsula’s coasts following the abolition in 1853 of a law prohibiting the felling of trees within one mile of the coast (Sandner 1962: 125). Eventually, timber extraction expanded into the peninsula’s mountains, making Nicoya the country’s most important region of tropical hardwood production for export. Between 1867 and 1895, timber exports from the region increased seven-fold (Secretaría de Gobernación 1924: 125, 127).

Conclusions

Although the Nicoya Peninsula, and especially the immediate vicinity of the town of Nicoya, was the first and longest-lasting area of Spanish settlement of the present-day territory of Costa Rica, its population in the colonial and early independence periods grew slowly. This is
especially true of the peninsula's mountainous zone, where the Hojancha study area is located. By the latter sixteenth century, the native population had been all but eliminated by disease, overworking, and forced emigration. In 1844, only a generation after Costa Rican independence, the population of the entire canton of Nicoya, which included highlands, lowlands, and the main town alike, was only 2,250 persons, about 27 percent of the Guanacastecan total (Nunley 1960: 50). By 1892, the entire canton's total was only up to 4,577, some 23 percent of Guanacaste's total (Nunley 1960: 55). It was at that time, however, that the next great phase of Nicoyan development began: the large-scale arrival of "Cartagos" displaced from the crowded Valle Central coffee region (Sandner 1962: 125). As the following and subsequent chapters of this dissertation illustrate, the immigration to the Nicoyan mountains of these people of European ancestry was accompanied by similar immigration of "Guanacastecos," or mestizos displaced from Guanacaste's faltering cattle hacienda economy. The articulation, or cohabitation, of these two groups produced in the zone a dynamic human geography, one that has played a fundamental role in Hojanchan region formation in the twentieth century.
Notes:

1 Population estimates for the Nicoya Peninsula and Costa Rica on the eve of Spanish contact vary significantly. Nunley (1960: 10) estimates that half of the population of all of Costa Rica occupied the peninsula in 1522. He places the Nicoyan population at 13,200. At the other extreme, Denevan (1976: 291) estimates a population of 400,000 for all of Costa Rica on the eve of contact. Newson's (1987) intermediate estimates of 125,000 for Guanacaste and 63,000 for Nicoya are likely the most realistic.
CHAPTER FOUR
THE TWENTIETH CENTURY SETTLEMENT HISTORY
OF THE HOJANCHA STUDY REGION

Throughout the nineteenth century, the Nicoyan population remained relatively small compared to the more crowded Valle Central. By the turn of the century, however, new settlement patterns emerged on the peninsula, due in part to population increases there and in the Valle Central, and in part to economic, political and social changes in both places. Migration occurred from east to west on the peninsula. Displaced mestizo peasants of the eastern Nicoyan lowlands began moving westward into the highlands, steadily but not in dramatically high numbers, toward the end of the nineteenth century. Shortly thereafter, a stream of displaced "Cartagos" left the Valle Central and followed the Guanacastecos up into the hills. During the first sixty years of the twentieth century, dramatic changes occurred in Hojancha’s cultural, social, economic and agroecologic landscapes. These transformations set the stage for subsequent economic and social disaster, and regional restructuring.

Migration of Guanacasteco Peasants to Hojancha

The population of mestizos and Indians in lowland Nicoya had increased by the end of the nineteenth century, following the disappearance of the hacienda tribute system, and the "stabilization of the peasant economy" (Mora et.al. 98
1986: 59). Conditions became crowded and land scarce around the estates, displacing many peasants. The indigenous settlement of the plain of Matambú likewise became crowded, stimulating migration further into the highlands. The lands of the altiplanos of Hojancha and Huacas were ideal for the reproduction of the mostly subsistent, but increasingly market-oriented Guanacasteco-peasant economy.

Settlers gained ownership of these prime lands simply by occupying and farming them continuously (Mora, et.al. 1986: 59-60). Households were usually located adjacent to streams or springs, to provide each with its own source of water. They were dispersed or scattered to accommodate shifting cultivation and, in a few cases, the grazing of a few head of cattle (Mena 1993). The settlers constructed traditional "ranchos," houses with straw roofs and cane walls, and round mud ovens located outside (Sandner 1962: 126).

The Guanacasteco-peasant economy was based primarily on hunting and swidden agriculture. Animals, birds, and fish were abundant early in the twentieth century, providing these pioneers a relatively healthy diet. They began to fell trees in the region's virgin forests, and to plant maize, rice, beans, plantains, yuca, and vegetables in small, rotating parcels of 1 to 3 has., cultivated for two years at a time (Mora, et.al. 1986: 61-63). Don Mateo
Mena, Hojancha’s oldest living resident, explained that when his family arrived from the Valle Central in 1912, there were only some two dozen Guanacasteco families scattered about the Hojancha Plain. Although their productive parcels at any given time were small, fallow land between households was set aside for the rotation of parcels. As conditions became more crowded in the 1920s and 1930s, the rotation cycle was reduced to ten years or less.

Guanacastecos frequently kept pigs or cattle, which could forage on fallow land and on recently harvested cropland. These animals supplemented the peasant diet and provided them a marketable commodity, albeit on a small scale. They were compatible with the rugged trails and proved to be advantageous, considering the difficult access to the region. The predominantly subsistence Hojanchan economy of 1900-1920 was supplemented by market-oriented activities, especially production of basic grains, to a large enough degree that wage labor had begun to replace the traditional system of reciprocal labor exchange (Mora, et.al. 1986: 61-65).

Migration of Cartagos to Hojancha

The Guanacasteco economy of Hojancha was further altered once Cartagos began settling the region in the 1910s and later. For example, they began to buy land, thereby implementing its commoditization. Hojanchan
involvement in national crop markets deepened. Agriculture became less diverse and involved a greater, though still limited, use of technical inputs.

The settling of Hojancha and neighboring highland communities of the Nicoya Peninsula was part of a nationwide process of outmigration from the increasingly crowded Valle Central coffee region, where social conditions were deteriorating for many campesinos (Parsons 1963: 451-453; Seligson 1980: xxvi; Augelli 1987: 7; MAG 1986: 88). This outmigration was significant, driving the Valle Central’s portion of Costa Rica’s population down from 85 percent in 1864 to 52 percent in 1950, despite growth in absolute population and urban-industrialization there in the twentieth century (Sandner 1970: 535-538).

Lands in the Valle Central became increasingly concentrated in the hands of a few powerful coffee-producing families, creating a movement toward a two-class society of propertied employers and propertyless laborers. In many cases, largeholder coffee producers obtained land from smallholder coffee producers. The latter were unable to maintain their farms intact, due to inheritance-based land division, or debt-driven loss of land (Gudmundson 1989: 223-230, 237-251).

Out-migration from the Valle Central involved more than push factors. It was not simply, as Gudmundson (1986: 125-131) argues, an escape of agrarian capitalism and its
requisite social divisions. Ironically, an important pull factor was the desire to participate in agrarian capitalism at the frontier, hopefully as a means of achieving upward economic mobility. Gudmundson (1986: 134-135) discovered through primary research that peasants migrating to highland regions of Guanacaste and other Costa Rican frontier settlement zones during the early twentieth century were "aggressively mercantile," and frequently successful at building political allegiances to the state. This is a theme integral to Hojancha's regional structuration later in the century, and an important topic in subsequent chapters of this dissertation.

Migrants from the Valle Central to Hojancha exhibited many of these mercantilist characteristics. The vast majority migrated from the western end of the Valle Central, especially from the communities of Palmares, San Ramón, and Naranjo. The Western Valle Central was itself a destination in the late nineteenth century for peasants of the central portion of the valley seeking new lands and a better way of life. Colonists from that region are regarded as among the most successful and industrious farmers of all Costa Rica (Sandner 1970: 540). These Cartagos brought improved farming techniques and technologies with them, including the use of fertilizers and plows, permitting a shortened fallow period and market-oriented crop production in addition to subsistence
(Campos, Rodríguez and Ugalde 1993: 8). Don Mateo Mena claims the greatest concern of the early arrivals was to improve transportation resources, to transform the primitive foot paths linking Hojancha and Nicoya into roads that could accommodate oxcarts and facilitate market-oriented crop production.

Among the conditions spurring the first wave of emigration from the western Valle Central were land concentration, land scarcity, land division from inheritance, and declining terms of trade with respect to agricultural inputs and consumer goods (Samper 1990; Gudmundson 1989: 227-230, 237-251). Additional factors amplifying the migration in the 1930s were continued population pressures, proletarianization, and severely lowered coffee prices related to The Depression of the 1930s (Samper 1990: 168; MAG 1986: 88; Seligson 1980: 27). Even as early as 1921 or 1922, the place name "Hojancha" became known in the Valle Central for its good soils, favorable climate, and clean water (Mena 1993).

Given that Guanacasteco settlers had already occupied the flatter, better quality lands, Cartago settlers had to choose between settling unoccupied lands, or "tierras libres," in the hillier, sloped portions of the region, and buying more favorable farmland from Guanacastecos (Wagner 1958: 212). Tierras libres, also known as "tierras baldios," were unclaimed lands which settlers could claim
under homesteading laws, by occupying and farming them continuously. These lands were quickly spoken for by the end of the 1930s in the study region (Mora, et.al. 1986: 60). In the 1920s, a market for land was established. Don Mateo remarked that Cartagos were able to buy lands on the cheap from Guanacastecos, who were much less experienced than their Valle Central counterparts in business dealings. He relayed a story of a Cartago who traded an oxcart to a Guanacasteco for a farm.

Many Guanacastecos who sold their farms, and others who lost them through misfortunes associated with crop markets, migrated southward and southwestward to the lower hills toward the Pacific coast. There they took advantage of homesteading laws, claimed new lands, and attempted to recreate their traditional subsistence agriculture. Recent arrivals to Hojancha who possessed capital could easily take advantage of the temporary hard times and debts of many of these pioneer smallholders, and purchase their farms at low prices. As long as tierras libres were available toward the coast, land prices in the emerging Hojanchan land market did not rise rapidly, despite the scarcity of unoccupied lands there. For example, in the 1930s, a farmer could buy a farm of 7 ha. for 300 Colones, the same amount he could get at market for selling the maize produced in a year on 3.5 ha. (Mora, et.al. 1986: 65-67). The relatively low land prices, coupled with emerging
labor markets, enabled some Guanacasteco laborers to save enough money to buy small farms in the altiplanos or mountains of Hojancha, and avoid having to seek out new lands toward the coast. The settlement pattern which emerged seventy years ago can still be observed in the canton today: relatively densely populated highlands dominated by people of predominantly European ancestry, and sparsely populated lowlands dominated by mestizos (Ureña 1965: 69).

The Highland Hojanchan Economy, 1920-1950

The Cartagos practiced a modified version of the traditional swidden system of the Guanacastecos. The primary differences were shortened fallow periods, more production for market, and much less reliance on household gardens for subsistence. Typically, January through April was the season of slashing and burning forest. Planting of maize, beans and rice occurred at the onset of the rainy season. These basic grains were cultivated together in rows for two years, and less demanding tuber crops, such as yuca or tiquisque were cultivated the third, and sometimes fourth, years. After that, the parcel lay in fallow up to five years. Yields were high, as were labor requirements: rarely did a family cultivate more than about 3.5 ha. at a time. In addition to the food crops, many families produced a small amount of sugar cane and coffee (at appropriate elevations), partly for subsistence and partly
Some kept a few head of cattle. Through the 1940s, however, basic grains continued to dominate the land use and economy of Hojancha (Leon 1948). In fact, according to Mena (1993), some farmers who could overcome transportation limitations and produce sufficient quantities of grains for market, took advantage of this "bonanza" by producing all they could for profit, then abandoned their farms and moved on once soil fertility was lost.

With land, labor, and consumer goods markets more deeply penetrating their economy, Hojanchans had a greater need to produce surpluses of food crops, and in some cases, non-food cash crops, cattle, and timber for local and national markets. The ecological effects of increased market-oriented production included shortened fallow periods, deforestation, transformation of two-year-old cropland into pasture, and resulting declines in soil fertility (Mora, et.al. 1986: 63; Campos, Rodríguez and Ugalde 1993: 8).

Social effects of increased market-oriented production were noteworthy. Devoting more time, effort and investment to producing crops and livestock for local and national markets meant that there was less time and fewer resources available for producing the items for livelihood which peasants previously produced on the farm. Increasingly, campesinos had to buy these products from markets.
Declining terms of trade of agricultural products with respect to clothing and purchased food items meant that each year, more agricultural products had to be produced to meet family needs. This placed strains not only on family economics but on land quality (Wagner 1958: 207, 212).

Once cattle production, financed by profits generated from crop surpluses, became more lucrative in the 1940s, much of Hojancha's cropland disappeared as it was converted to permanent pasture (Barrantes 1993; Campos, Rodríguez and Ugalde 1993: 8), reinforcing smallholders' dependency upon market-oriented production of cattle. Unemployment and landlessness resulted from increased pasturage, and decreased economic yields per hectare of cropland (Mora, et.al. 1986: 65-66).

An important factor in the land use decisions of Hojanchans in the first half of the twentieth century was poor transportation infrastructure. According to Regulo Barrantes, one of the earliest settlers of Hojancha, market linkages remained weak even into the 1940s. Each month, a small number of oxcarts carried the region's production of basic grains to the towns of Mansion or Nicoya, or to coastal Nicoyan ports, for eventual shipment to Puntarenas by boat. Oxcarts were introduced into the Hojancha highlands by Cartagos, but not until the primitive footpaths and rugged trails linking the region to the Nicoyan lowlands were widened and smoothed to accommodate
them. These improvements were made by Hojanchans, by neighbors working together with pick axes, shovels and machetes. The result of these efforts was a road, that eventually became the present-day highway, linking Hojancha and Matambú with Mansión. No longer did Hojanchans have to transport surplus maize, rice or beans on horseback to market at Mansión and Nicoya (Mena 1990). Oxcart caravans facilitated shipments of grains to these markets and to Puerto Jesús and Puerto Thiel for shipment to Puntarenas (Wagner 1958: 210; Mena 1993). The Cartagos who introduced and operated the oxcarts were, in effect, middlemen who appropriated surplus value from other campesinos dependent upon them for trade (Mora, et.al. 1986: 69).

The Changing Hojanchan Economy in the 1950s

In 1950, when Hojancha's pioneer era already had passed, basic grains accounted for only ten percent of all Costa Rican agricultural production, and this percentage continued to drop in subsequent decades (Salas, et.al. 1983: 68-69). The decline in importance of basic grains to Costa Rican agricultural production was the logical result of state policies during the previous 50 years, which wavered between a regard for peasant well-being, and an even stronger regard for the success of the agroexport sector. Subsidies and other protectionist measures aided coffee and banana producers and exporters, while basic grains were left to the graces of laissez-faire non-
intervention, to the laws of supply and demand (Barahona 1980: 221-223).

By 1950, maize, beans and rice were no longer the profitable crops they had been in Hojancha for nearly 50 years. Much of the region's soils already were exhausted from decades of market-oriented crop production that necessitated reduced fallow time, and from poor management of ever-expanding grazing lands. Plagues afflicted the maize crop in particular, and campesinos, suffering from continually decreasing terms of trade, lacked the capital to combat them with agrochemicals. State-backed assistance, such as credit, the establishment in Hojancha of an agricultural extension service or an agency to buy crops, was nowhere to be found (Mena 1993). Hojancha's locational and transportation disadvantages, compared to other basic grains-producing regions of Costa Rica, became acute (Campos, Rodríguez and Ugalde 1993: 8). In the late 1940s, middlemen from outside the region began to monopolize the trade in Hojanchan basic grains. Their cut of the profits worked to the disadvantage of Hojancha's campesinos (Barrantes 1993).

In the 1950s, the cultivation of basic grains began to take a back seat to the production of cattle, which was better suited to the degraded landscapes and lengthy dry season of Hojancha. The forest ecosystem which had fostered subsistence agriculture in the region for many decades was
displaced by a pastoral ecosystem, as *jaragua* (*Hypharhenia rufa*) and other grasses invaded fallow crop fields (Mora, *et al.* 1986: 70, 76).

Besides environment, other factors contributed to the rise of cattle culture in Hojancha. In the 1950s, the global beef market expanded dramatically, due in large part to increased demand for cheap beef in the United States (Chant 1991: 55), and the increased demand for beef in the Valle Central that accompanied increases in population and industrialization there. In fact, because of the American fast food industry's growing requirements, the United States began opening its internal markets to Central American producers (West 1976: 392; Mora, *et al.* 1986: 77). State economic development strategies during the decade, already favoring agroexport subsidies, were broadened to include the beef export sector. The national banking system identified beef production as a viable alternative economic activity for the country's development strategies, and began to subsidize credit to the beef producers, processors, and exporters (Campos, Rodríguez and Ugalde 1993: 1). As a result of these actions, Costa Rican beef production tripled in the 1950s, and its proportion of total Costa Rican agricultural production increased from 4.5% in 1950 to 10.1% in 1960 (Salas, *et al.* 1983: 69-70).

The Inter-American Highway, completed in the 1950s, facilitated the transport of cattle and processed beef out
of Guanacaste, thereby opening up the province (including indirectly the Nicoya Peninsula) to new trade networks (Mora, et.al. 1986: 77). In Hojancha, cattle production, in number of heads, increased 800% between 1935 and 1963, with most of that growth occurring after 1950 (Campos, Rodríguez and Ugalde 1993: 1).

Cattle represented an attractive activity to many of Hojancha’s operators of small and medium farms in the 1950s. The terms of trade of basic grains with respect to land, wages, consumer goods, and agricultural inputs had fallen steadily since the 1930s. From the point of view of farm owners, Hojancha had a comparative advantage at cattle production, and a comparative disadvantage at basic grains compared with other regions producing food crops, such as the Valle General, that enjoyed more favorable market access and conditions facilitating mechanization. Those Hojanchans possessing capital set the transformation to cattle production in motion by investing this capital in herds and expanding their land holdings. In many cases this capital had been brought to Hojancha in previous decades by settlers from the Valle Cantral, who reinvested it in market-oriented basic grains production, thereby realizing modest but sufficient profits to finance the subsequent livestock-based commercial venture. Because land prices, were significantly cheaper earlier on, the earliest arrivals could buy more land, and were the ones
most responsible for the subsequent transformation to cattle (Mora, et.al. 1986: 74, 77).

As new capital was generated from cattle production, farmers began hiring laborers to cut down forests and actively plant jaragua, rather than allow it to simply invade fallow crop fields. Mountain slopes became pastures. Investments were made in improved cattle varieties, such as Zebu and Brahman, and in barbed wire fencing to separate pasture sections. The expansion of grazing land came not only at the expense of forest, but also cropland. By turning fallow cropland into pasture, fallow periods and soil fertility were reduced. From 1960 onward, Hojanchans produced basic grains almost entirely for subsistence (Mora, et.al. 1986: 76). Clearly, cattle production perpetuated itself: it contributed to land degradation, and the degraded lands could profitably produce only cattle.

The social impact of Hojancha’s transformation to cattle production was considerable. The smallest farms, which had fared well during Hojancha’s basic grains bonanza, could not profitably be converted to land-extensive cattle grazing. Many smallholders, therefore, sold their farms in the 1950s and later. Beginning in the 1950s, the farmers enjoying success from cattle were able to buy out those farms that suffered from the decline in
profitability of basic grains, and those farms that were too small to profitably graze cattle (Mena 1993).

Because cattle production is not labor intensive, requiring only an average of 6 worker-days, or "jornales" per hectare per year, compared to 34 jornales for beans and 38 for maize (Chant 1991: 55), there was less work available to landless or land-poor Hojanchans. Permanent emigration had begun from Hojancha to such regions as the country's banana zone around Golfito (Wagner 1958: 215; Sandner 1962: 130). Some campesinos without sufficient land who chose not to emigrate permanently from the peninsula moved to the remote lowland hills near the coast, in an attempt to engage in traditional subsistence agriculture. Others migrated seasonally to the Valle Central to earn wages from the coffee harvest (Mora, et.al. 1986: 79).

Conclusions

By the end of the 1950s, Hojancha's transformation to a predominantly cattle region had begun, and a new social landscape was taking shape. Sandner (1959: 38) noted that the town of Hojancha, which in 1959 had a number of shops and services, and 38 households, more than double that of 1945, was a town populated by recent arrivals. Only two of the families had lived there several decades. He noted the preponderance of speculators and "comerciantes," or businessmen, living in the town. Surrounding the town, a
process of cattle-based land concentration was occurring alongside "minifundización," the division of farms into small units with limited economic potential. By then, most of the cultivators lived in the nearby highlands and other altiplanos of the region.

A process of social class formation in Hojancha was fully underway. Those settlers who had brought some capital with them, typically generated from the sale of their farm units in the western Valle Central, were able to diversify their activities, concentrate on the more profitable ones and avoid less profitable ones, thereby reinforcing their favorable socioeconomic position. They built up herds, generated more capital, and purchased additional farmland from less fortunate neighbors. The conjuncture of forces underlying regional transformation in the 1950s and later also included environmental deterioration, shifts in state policies, and changes in prices of crops and farming inputs. With an absence of state-sponsored price supports, campesinos earned less for basic grains with respect to rising costs of land, fertilizers, labor, and transportation. Cattle generated more income, especially per unit of labor, in part because of increased global demand for cheap beef, and in part because of subsidized credit. The expansion of beef production was directly linked to a reduction of fallow cropland, and increasingly exhausted soils.
By the end of the decade, cattle was the only viable economic activity for most petty-capitalist farmers occupying the altiplanos and sloped landscapes of the Hojancha study region. Commercial production of basic grains was all but gone. With the exception of the communities located above 500 meters, where coffee cultivation was possible, Hojancha had developed a dependency upon cattle production which, in the 1960s and 1970s, would prove disastrous for many of the region's smallholders. This deterioration in Hojancha's social landscape, and the local responses to it, would become key features of contemporary Hojanchan regional restructuring.
CHAPTER FIVE

HOJANCHE AND THE WORLD ECONOMY, 1960-1980:
THE BASIS FOR SOCIAL AND ENVIRONMENTAL CHANGE

The shift toward market-oriented cattle production in Hojancha in the 1950s set the stage for a major transformation of Hojanchan society and landscape in the 1960s and 1970s. During those decades, economic and land use changes were even more dramatic than those of the 1950s, when farm operators responded to a conjuncture of emerging conditions: changes in international beef markets, land degradation, deepening land markets, and a deterioration in the terms of trade of basic grains. By the mid-1960s, however, these conditions had deteriorated to the point of creating a "beef trap." With the exception of many smallholders located in the canton’s highland coffee zones, Hojanchans became dangerously dependent, both environmentally and economically, upon cattle production. The region would experience denuded landscapes, damaged water resources, landlessness, unemployment, land concentration and emigration at a pace almost unknown in Costa Rica since independence.

From the 1960s onward, Hojancha’s linkage to the global political economy became locked into place. The purpose of this chapter is to identify the economic trends and political actions occurring at multiple scales that played a role in the structuring and restructuring of this small rural region in the 1960s and 1970s. As this chapter
will argue, decisions as distant as those made by European and North American consumers and corporate interests were as important as policies enacted in Washington, D.C. and San José, Costa Rica, and actions taken by Hojanchans, in defining the opportunities and constraints that characterized economic and social change in the study region during that time period. These descriptions of the political economy of Hojanchan smallholder change are categorized according to the canton’s three pertinent activities of the time: beef cattle, which experienced a productive boom and bust; basic grains, the traditional mainstay of the Hojanchan economy that ceased to be an important market crop; and coffee, an export cash crop that became an important persistence strategy of many Hojanchan campesinos.

Each of these products has been subjected to changes in consumer demand, and changes in prices, both internationally and domestically. Each has been affected as well by fluctuations in production in Costa Rica and beyond. Hojanchan production of these three products has not been strictly market-driven. Given the Costa Rican state’s activist policies since the 1940s, each of these products has been affected by such policies to varying degrees. Collectively, near and distant market conditions and state involvement (or neglect) have contributed to
changes in local farmers' decisions, and ultimately to a transformation of Hojanchan regional identity.

Perhaps the most direct influences underlying these land use and regional shifts since the 1940s have been Costa Rican state policies toward the agricultural sector. These have largely favored cash crops for export, such as coffee and bananas. Despite growing balance of payments deficits in the 1950s, resulting from deteriorating terms of trade for these traditional exports, the state reinforced its posture toward the export sector, in an effort to enhance foreign exchange earnings. By 1960, beef had become a major component of this policy. It was considered a viable part of a strategy to diversify exports and reduce dependency on traditional agroexports. At various times since 1960, the state hoped to stimulate domestic production of, and self-sufficiency in, basic grains and other foodstuffs. The desired results, however, have not always materialized. For example, during the 1960s cattle boom, when state credit policies favored beef production, and when farms in Hojancha and elsewhere in Costa Rica increasingly turned to that activity, coffee and bananas still accounted for more than 80 percent of the country's agricultural exports (Salas 1983: 159-161).

Costa Rican state agricultural policies are direct responses to both fiscal concerns which the state faces, and trends in global and national markets for given
products. As noted, credit to cattle producers followed favorable beef markets. The state has supported coffee production when production had contracted in other coffee producing countries or when pricing and consumer demand trends warranted greater Costa Rican participation in the global coffee market. Basic grains have experienced a wide array of state action and neglect, depending upon the particular crop and upon a host of other national, regional and global production, market and pricing issues. During the past two decades, the widespread Latin American economic crises of debt (Bianchi 1987) and inflation (Prebisch 1987), have largely defined the framework of these Costa Rican policies. These events have affected Hojanchan productive decisions and environment alike.

The Political Economy of Beef Cattle

Cattle production, as a primary economic activity, is relatively new to Hojancha. This short history contrasts sharply with that of the balance of northwest Costa Rica, where cattle ranching emerged as an important activity in the sixteenth century, and has remained so to the present. Moreover, Hojancha’s dependence upon cattle production is remarkable, given that the average farm size is smaller than elsewhere in Costa Rica’s northwest livestock region, and the large land area that profitable cattle farming requires. Edelman (1985: 156) and Solís (1981: 145-146) estimate that small cattle farms in Guanacaste, under 100
hectares (75 head) in size, are unable to produce sufficient income to sustain an average family of six members. As in the 1970s, more than three out of four Hojanchan families today that rely most heavily on cattle for income, have fewer than 100 hectares of pasture. In 1984, only 34 Hojanchan farms had more than 100 head, and only 87 had more than 50 head (DGEC 1987). The land-extensive nature of cattle production was a key feature of Hojancha's economic and environmental degradation in the 1960s and 1970s. Despite the seeming incompatibility of cattle production and Hojancha's small-farm-dominated landscape, the region was drawn deeply into the global beef market, because of increased demand for beef in the United States, and the respective roles of the Costa Rican state and international lending institutions and development agencies (Edelman 1985: 169).

Production and Marketing Characteristics

Cattle culture is entirely of Old World origin. The Spaniards introduced cattle into the Western Hemisphere during the first two decades of their exploration and settlement of the Caribbean and the American mainlands. The "Criollo" (Bos taurus) cattle that represented the sole cattle type of the Western Hemisphere until early in the nineteenth century, traces its ancestry to a few hundred cattle transported to the Greater Antilles from the dry grass rangelands and marshlands of the Andalusian region of
southern Spain, by way of the Canary Islands (Rouse 1977: viii, 3, 11; Butzer 1988; Jordan 1993: 67). The Spaniards introduced Criollo cattle into Panama in 1520, primarily from Jamaica. By 1524, offspring of these were driven on land through Costa Rica to the Pacific lowlands of Nicaragua. In 1561, Criollo cattle produced by these Nicaraguan herds were brought to Guanacaste for establishment of herds (Rouse 1977: 36-49).

The Criollo proved through the centuries to be vulnerable to the tropical heat and diseases. In the 1920s, Costa Rican cattlemen introduced Zebu cattle (Bos indicus), of Indian origin, to the country (Hall 1985: 185). Most beef cattle produced in Costa Rica today are these hybrid varieties. An example is the Brahman, which is a cross of zebu and one or more European breeds. The most common pasture grass is jaraqua (Hyparrhenia rufa) of African origin that easily takes over the fallow fields and establishes itself quickly (Shane 1986: 16).

Cattle are attractive to smallholders in Central America, and elsewhere in Latin America, because they represent a way of reducing risk. Theoretically they can be kept until prices are favorable or quickly converted to cash during times of emergency (Hecht and Cockburn 1989: 151). In Hojancha, this strategy can be risky, given the region's lengthy dry season in some years. Nevertheless, land exhausted by crop production can earn income for a few
additional years from cattle. Complicating the picture, it takes, on average, five years to raise an animal to slaughter weight (Place 1985: 294).

Costa Rica has become Central America's second largest beef exporter after Guatemala (Shane 1986: 69). Production has expanded from the traditional northwest Costa Rican flat cattle region to lowlands of the central and southwest Pacific and Caribbean regions, as well as to the country's Valle Central and Valle General highland zones (Hall 1985: 87, 183-185).

Between 1960 and 1975, the number of cattle in Costa Rica doubled and pasture land increased more than 60 percent (Parsons 1976: 124). Beef as a portion of Costa Rican export earnings increased from zero to ten percent between 1950 and 1969. As a portion of the value of total Costa Rican agricultural production, cattle increased from 14 percent in 1950 to 25 percent by the mid-1960s. By 1970, already more than 70 percent of Costa Rica's farmland was in pasture (Spielman 1972: 33, 35). Among the results of this dramatic expansion are a steady reduction in land devoted to basic grains, and increasingly eroded and leached soils, especially on grazed slopes (Hall 1985: 87). Guanacaste has seen the greatest expansion of the activity. The province contains nearly 40 percent of the country's pasturage and cattle, has received more than half the credit earmarked for the cattle sector, and has produced
more than half of the country's beef exports (Solís 1983: 14-20).

Cattle marketing in Guanacaste is well-developed. Most Hojanchan cattle producers sell their product, whether calves for further fattening, or already-fattened animals, to intermediarios, or middlemen. A minority of producers sell directly to "la subasta," or auction house. Intermediarios, in turn, sell calves either directly to other farmers for fattening or the auction house, where other intermediarios or cattle farmers buy them for fattening. These auction houses are scattered throughout Costa Rica. The closest to Hojancha is at Santa Cruz, some 40 kilometers away. The country also has a small number of much larger auction houses. The closest of these to Hojancha, known as "la plaza," is located in the Valle Central. In some cases, cattle are sold directly to slaughter houses (or export houses) by intermediarios, bypassing auction houses. "Empacadores," or slaughter houses, sell either processed beef to domestic supermarkets or butcher shops, or they export frozen beef (Morales and Villalobos 1985: 333-337).

Since Costa Rica began exporting beef in the 1950s, only a minority has been produced for domestic markets. This beef export boom is part of the second of two "long waves" which Hubbard (1986: 15-24) identified as characterizing the history of the global beef trade. The
first wave began in 1880, peaked in 1919, and declined in the late 1940s. Britain and other rapidly-urbanizing and industrializing countries imported refrigerated beef first from the United States first, and later from Argentina. The second wave began in the 1950s, climbed throughout the 1960s and 1970s, and levelled off in the early 1980s. This wave was dominated by imports into the United States of "manufacturing" beef, or lower-quality frozen beef destined for hamburger and the fast food industry, from Australia, New Zealand, and Central America.

Although exports of manufacturing beef from Costa Rica and other Central American countries have not affected the volume of world beef exports greatly, it has been extremely important within the political economy of these small countries (Hubbard 1986: 18). Thus, while most increases in beef consumption in the United States during the second wave were met by domestic production, there have been opportunities in many years for Central American countries to supply that market. Of course, when the global market experiences a glut, the major beef countries, themselves producers, restrict imports and dump their own surpluses on the world market to protect domestic prices. Costa Rica and other Third World beef exporters dependent upon these markets, experience worsened price conditions.

The dramatic, nine-fold increase in Costa Rican beef exports between 1960 and 1979 was not accompanied by a
similar increase in production for domestic consumption (only a 60 percent increase throughout the two decades.) This phenomenon can be explained in part by the greater rise in prices of export beef (510%) than domestically-consumed beef (385%), as the latter is subject to state price ceilings (Aguilar and Solís 1988: 21-22). The increases in production of beef for exports, and to a lesser extent domestically consumed beef, resulted in a 39% increase in pasture area in Costa Rica in the 1970s, mostly at the expense of forest, and secondarily at the expense of foodcrop land (Aguilar and Solís 1988: 4-5; Shane 1986: 31).

In any given year, some 85-95 percent of Costa Rica’s beef exports are shipped to the United States (Simpson and Farris 1982; El Ganadero 1993a: 32, 35). State policy and consumer habits in the United States, therefore, are important to Costa Rica’s beef export sector. Sanitation regulations, a major non-tariff barrier to imports of beef into the United States, has created a distinct advantage in many years for Central American countries. South American beef exporters had been barred access to the United States market because of Aftosa, or hoof-and-mouth disease (Simpson and Harris 1982: 243-248; Shane 1986: 82).

The 1974-1975 crisis in export beef prices was in large part due to the nature of beef import policies of the United States. Before 1958, most Costa Rican beef exports
were in the form of live cattle to Peru. Subsequently, exports shifted to deboned chilled beef for North American markets. Until 1964, Costa Rica and other countries had only to receive USDA certification of their packing facilities. But in 1964, when beef prices were low and there was a glut in the U.S., Congress passed a bill to regulate imports (Edelman 1985: 170-171). Between 1964 and 1979, the U.S. regulated beef imports by means of a principle of market sharing. A quota allowed between 6 and 7 percent of U.S. domestic production levels to be imported. The law was cyclical; that is, as U.S. production increased, so did imports, producing a destabilizing effect on prices, such as in 1974-1975. In 1979, a counter-cyclical law was established, allowing U.S. domestic production and imports to vary inversely. A minimum import quota of 625,000 tons was part of the law (Simpson and Farris 1982: 243).

After 1954, Costa Rica exported over half its beef, and sometimes as much as two-thirds, until 1977 (Morales and Villalobos 1985: 332; Parsons 1976: 124). Since 1977, less than half of Costa Rica's beef has been exported (Table 5-1), due in part to a weaker U.S. Dollar and, later, to the implementation of the counter-cyclical law, and a general decrease in per-capita U.S. beef consumption (Shane 1986: 85; Morales and Villalobos 1985: 331, 339). The effect of this trend toward less production for export
and more for the lower-priced and less dynamic domestic market, has been less profit for Hojancha’s beef producers (El Ganadero 1993a: 32).

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Production in Metric Tons</th>
<th>Percentage of Production for Export</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972-73</td>
<td>n.d.</td>
<td>54.0</td>
</tr>
<tr>
<td>1974</td>
<td>62,058.6</td>
<td>54.0</td>
</tr>
<tr>
<td>1975</td>
<td>71,662.2</td>
<td>51.5</td>
</tr>
<tr>
<td>1976</td>
<td>74,465.9</td>
<td>56.2</td>
</tr>
<tr>
<td>1977</td>
<td>82,623.9</td>
<td>47.6</td>
</tr>
<tr>
<td>1978</td>
<td>91,533.7</td>
<td>49.9</td>
</tr>
<tr>
<td>1979</td>
<td>91,035.8</td>
<td>47.0</td>
</tr>
<tr>
<td>1980</td>
<td>78,751.8</td>
<td>41.8</td>
</tr>
<tr>
<td>1981</td>
<td>97,145.7</td>
<td>47.0</td>
</tr>
<tr>
<td>1982</td>
<td>72,562.4</td>
<td>40.3</td>
</tr>
<tr>
<td>1983</td>
<td>66,547.5</td>
<td>27.6</td>
</tr>
</tbody>
</table>


Prices throughout the cattle boom period were generally favorable to Guanacastecan beef producers until the dip in 1974-1975 (Table 5-2). The main cause was a dramatic reduction of beef imports by the EEC (European Economic Community), and a resulting glut in global beef supplies (Simpson and Farris 1982: 238). This proved fatal to Hojancha’s smallest producers, those with herds too small to ever produce a comfortable profit margin, even when prices comfortably exceeded production costs.
These smallest producers, after years of exhausting their soils by expanding grazing lands to the limits, were already realizing narrow profit margins. From 1974 to 1975, export production in Costa Rica dropped nearly 30 percent (Solís 1983: 23), leaving the smallholders of Hojancha to compete with large cattle ranches elsewhere in Costa Rica for a tight domestic market. According to the locals and to the Instituto de Fomento y Asesoría Municipal of the Costa Rican Government (IFAM 1976), this period produced severe unemployment and farm loss in Hojancha. Not until the late 1970s, when the damage had already been done, did prices recover. By then, however, many of Hojancha’s smaller cattle producing farms had been absorbed by larger ones.
State Policies Toward Beef Production

In spite of the vulnerability of Hojancha's producers to global market conditions well beyond their control, they have continued to concentrate on raising beef since the 1960s. In part, this is because the denuded, sloped Hojanchan landscape, which has suffered severe erosion in many cases from two decades of overgrazing, would not profitably support other activities. State policies stimulating beef exports also explain this behavior, though such policies typically have been directed toward the largest cattle ranches of Guanacaste, rather than to small-scale cattle producers, typical of Hojancha (Aguilar and Solís 1988: 129, 136; Spielman 1972: 36, 38; Edelman 1985: 169-170).

Credit in particular has favored the largest ranching operations, because there is more land which could become collateral, and because such credit is used less to increase output per hectare and more to acquire additional land and expand the area in pasture (Edelman 1985: 174). In the latter 1960s, credit from the nationalized banking system granted to cattle production was nearly equal to that of all other agricultural sectors combined. This was the case, despite beef's low ranking among export earnings, compared with other agricultural activities, and despite its meager contribution to the national per-capita protein intake (Table 5-3).
Since 1970, more than half the agricultural credit has been for cattle production (Aguilar and Solís 1988: 5-6). In fact, the amount of credit to this sector in the 1956-77 period increased from 13.8% to 29.5% of all Costa Rican National Banking System credit, a greater increase than for any other sector of the Costa Rican economy, including industry. Furthermore, credit to cattle ranching has been longer in term and lower in interest rate than for other sectors of the economy. The state frequently has subsidized credit with interest rates below the market rate (Place 1985: 290). The beef sector has exhibited a much higher rate of unpursued loan defaults, due to the lack of political effort to tighten controls over this sector (Edelman 1985: 173-176).

**TABLE 5-3**

**BEEF AND LIVE CATTLE AS A PERCENTAGE OF TOTAL COSTA RICAN EXPORTS, SELECTED YEARS 1954-1987**

<table>
<thead>
<tr>
<th>Year</th>
<th>Beef as Percent of Total Exports</th>
<th>Year</th>
<th>Beef as Percent of Total Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>1954</td>
<td>0.4</td>
<td>1975</td>
<td>7.7</td>
</tr>
<tr>
<td>1958</td>
<td>3.3</td>
<td>1978</td>
<td>7.1</td>
</tr>
<tr>
<td>1962</td>
<td>4.8</td>
<td>1980</td>
<td>7.2</td>
</tr>
<tr>
<td>1966</td>
<td>5.2</td>
<td>1982-86 (avg.)</td>
<td>4.8</td>
</tr>
<tr>
<td>1969</td>
<td>8.1</td>
<td>1987</td>
<td>5.7</td>
</tr>
<tr>
<td>1972</td>
<td>10.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The expansion of cattle ranching during the last four decades is intimately linked to the nationalization of banking that occurred after Costa Rica’s 1948 Civil War and the ensuing victory of the social democratic Partido Liberación Nacional (PLN), or National Liberation Party. The state had identified beef as an activity with great potential for economic development and for foreign exchange earnings. Clearly, by directing a large share of credit toward beef production, the state, under the leadership of both the PLN and the more conservative Partido Unidad Social Cristiano (PUSC), or Social Christian Unity Party, has directly fostered land concentration and deforestation (Aguilar and Solís 1988: 129; Salas, et.al. 1983: 167).

State involvement in the beef cattle sector goes beyond the provision of credit. Research, promotion, the building of infrastructure, pricing policies, and quotas of different types are among the state actions that have influenced Costa Rican cattle production. Between 1966 and 1970, a period in which Hojancha experienced land concentration and degradation from its emphasis on cattle production, the state spent $11 million for the promotion of cattle production and sales, nearly double the $6 million spent for all agricultural crops (Spielman 1972: 38). The state’s completion of the Interamerican Highway between Guanacaste and the Valle Central, as well as the improvement of many of Guanacaste’s secondary roads and
oxcart paths to accommodate cattle trucks, are among the state's activities directed at stimulating beef production. The construction of the large market places (la plaza) by the state was part of the strategy (Place 1985: 290). Since the 1950s, the state has sponsored research for improvements in herd quality, feeding, and production technologies (Shane 1986: 61-66). Several Hojanchan beef producers expressed their belief that their activity is for the good of Hojancha and the country, because the state has promoted the activity for many years as good for the region and the country.

Costa Rican state economic policies associated with cattle production exemplify a basic development dilemma. On one hand, the state believes there is a need to export beef to generate foreign exchange earnings. On the other hand, the state pursues "cheap beef" policies for boosting domestic consumption (Hubbard 1986: 26-27). A two-tiered pricing system for beef exists. Beginning in the 1960s, beef for domestic consumption has been subject to price ceilings imposed by the Consejo Nacional de Producción (CNP), or National Production Council. Quotas imposed by the CNP to ensure adequate domestic supplies have affected exports, and therefore, foreign exchange earnings, in some years. The two-tiered system has prevented smaller cattlemen who produce primarily for domestic market, such as Hojancha's, from realizing the great profits of large
export-oriented cattle ranches (Spielman 1972: 51; Morales and Villalobos 1985: 333).

Guanacastecan, including Hojanchan, beef production has not been unaffected by the actions of international lending institutions and development agencies. State policies often reflect, or are even tied directly to, the policies of these agencies. The prevailing point of view in the 1960s and 1970s of such entities as the World Bank, the Inter-American Development Bank (IDB) and the United States Agency for International Development (USAID) was that beef cattle production, if properly managed, could be a sustainable, successful provider of food and revenue to Central American countries. Beef production, therefore, has constituted an important part of the activities of these agencies in Costa Rica. In fact, World Bank and IDB loans to Costa Rica for cattle development programs exceeded those to any other Central American country for the same purpose in the 1960s and 1970s (Brockett 1988: 48).

The World Bank provides credit to initiate projects in the livestock sector, provided the state makes technical assistance available. Among the largest of World Bank cattle projects in Costa Rica was a $55.6 million loan in 1977 for ranchers to expand herds by a total of 20,500 head, producing an additional 1,700 metric tons of meat and 20,000 metric tons of milk (Shane 1986: 35-36). USAID,
recognizing the profitability of the export beef industry, due to its low labor costs, has enthusiastically provided loans and grants to the cattle sector, even as part of reforestation and conservation projects (Shane 1986: 45-46).

The IDB typically finances up to half of a livestock project's costs, and the borrowing country finances the rest. While loans for livestock projects typically comprise only about 5 percent of IDB's loan portfolio to Latin America, for Costa Rica, the percentage is typically much higher. Between 1961 and 1977, for example, more than one-third of IDB's loans to Costa Rica were for cattle (Edelman 1985: 171-172). Six IDB loans during that period collectively provided $18.4 million for animal production programs. Since 1978, IDB has referred to small-farm cattle production as a potential growth sector and a desired destination for IDB funds (Shane 1986: 37-40).

Hojancha's cattle-producing sector has seldom been a direct recipient of funding by these international agencies. This does not, however, mean that the region is unaffected. Chapter Seven includes a description of the most recent efforts of Hojanchans to secure development funds for reforestation and other small-farm improvements. This included a rather substantial loan, in part from IDB and in part from the state, that contained funds for Hojancha's beef producers. Hojancha must compete with
other cattle-producing subregions of Guanacaste, especially those with large cattle ranches that have directly received the aid. In short, Hojancha’s cattle production and marketing are articulated within the broader national and international political economy of cattle production and marketing, which is affected by the activities of international lending and development institutions.

Cattle producers of Costa Rica, including Hojancha, have enhanced their position with respect to the state by means of their powerful lobby, the Cámara de Ganaderos, or Chamber of Cattlemen, organized at the national, provincial and cantonal levels. Many of its members have personal connections with officials of the National Banking System and with other government officials. These have resulted at times in subsidized low interest rate loans, liberalized export laws (Edelman 1985: 170, 173), relaxed export quotas (El Ganadero 1993a: 32), taxbreaks for companies manufacturing vaccines, and higher sanitary standards for cheaper beef imported from other Central American countries (Comunidades 1990: 12).

The cantonal-level chamber of Hojancha establishes committees to discuss producers’ problems, and applies pressure to the provincial-level chamber, and hopefully to the national-level chamber in-turn. Often, aid is sought for animal health and herd improvement, and changes are requested in quotas and prices. Hojancha’s chamber also
buys salt, molasses, or vaccines in bulk quantities to pass the savings on to member producers.

The Viability of Beef Production as a Development Strategy

Place (1985: 292) argues that the Guanacastecan cattle boom, led by state and international agency initiatives, has not been an effective strategy to provide economic security and social well-being to campesinos:

Guanacaste's integration into the international economy led to economic reorganization which has caused a number of changes in land tenure and employment patterns. Some of these changes run counter to Costa Rica's best interests in the long run, since they appear to be reducing, rather than improving, the quality of life for a large number of rural people.

The most telling sign of the failure of beef production to improve livelihoods in Hojancha and elsewhere in Costa Rica is that, as a rural activity whose expansion has displaced the production of food crops, cattle grazing absorbs very little labor. On a per-hectare basis, it generates about one-seventh the employment of basic grains (Table 5-4). Thus, land concentration, landlessness and unemployment have accompanied the expansion of cattle production in Hojancha and elsewhere in Guanacaste. Indeed, Augelli (1987: 11-12) identifies the increase in pasture for export beef production as a major factor in the closing of Costa Rica's settlement frontier in the 1960s.

The "protein flight" which the Guanacastecan cattle boom of the 1950s to 1970s represented, has resulted in a
domestic food crisis. Between 1955 and 1969, during which time Costa Rican cattle production increased fairly steadily, per-capita beef consumption actually decreased from 22.4 kg./person/yr. to 15.4 (Spielman 1972: 50). The two-tiered pricing system, yielding more favorable prices for beef exports, has caused producers to focus on export production at the expense of domestic production. This has at times driven domestic beef prices upward, beyond the reach of many consumers. For example, in 1949, the wholesale beef price in Costa Rica was one-fourth that in the United States; in 1978, it was three-fourths, resulting in the decreased per-capita consumption in Costa Rica. Hojanchans frequently complain about their inability to afford beef. Indeed, in 1993, it was common to observe higher ground beef prices in Hojancha’s pulperias and butcher shops than in supermarkets in the United States.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Jornales (worker-days) per Hectare per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>85-100</td>
</tr>
<tr>
<td>Beans</td>
<td>35-50</td>
</tr>
<tr>
<td>Maize</td>
<td>55-70</td>
</tr>
<tr>
<td>Coffee</td>
<td>155</td>
</tr>
<tr>
<td>Sugar cane</td>
<td>76</td>
</tr>
<tr>
<td>Pasture</td>
<td>6</td>
</tr>
</tbody>
</table>

Source: Place 1985: 291; Ribier, et.al. 1988: 42-47
Rural communities, such as those of the Nicoya Peninsula, have consumed less beef per capita than communities of the Valle Central, where slaughtering is concentrated (Place 1985: 293). Furthermore, cattle production has displaced not only basic grains cropland but also forest. Expanded cattle production has created scarcities of wood for construction of dwellings, firewood, game animals, and other forest resources traditionally important to campesinos (Place 1985: 292-293).

Social disparities are a byproduct of Guanacastecan cattle production, as the activity has become increasingly concentrated. Agricultural Census data reveal that by the early 1970s, when the cattle boom had become bust for many Hojanchans, forcing a large number to emigrate, the smallest half of Guanacaste's farms, those under 20 hectares, accounted for only six percent of the grazing land and 9.5 percent of the cattle. Collectively, the largest six percent of the farms, those larger than 200 hectares, accounted for over 55 percent of the grazing land and over half the cattle. Only two decades earlier, less than four percent of the farms were larger than 200 hectares, and they accounted for less than half the grazing land and only 39 percent of the cattle (Aguilar and Solís 1988: 9-11).
Hojancha’s Participation in the Cattle Boom

The polarization in land tenure that resulted from the Guanacastecan cattle boom operated on a somewhat smaller scale in Hojancha, but to a degree significant enough to eliminate many small farms. Hojancha’s uniqueness as a smallholder stronghold, egalitarian by Guanacastecan standards, was threatened. Although no huge cattle estates emerged in Hojancha, the subregion became as dependent upon beef production as the rest of Guanacaste. Ribier, et.al. (1986: 19) argue that few areas of Costa Rica have responded as strongly as the central Nicoya Peninsula to state policies promoting cattle production since the 1950s. The poorer transportation infrastructure of Hojancha compared to other small farm regions of Costa Rica, even into the early 1980s, made cattle the preferred activity, as it did not require the same direct transportation access as other agricultural products (Ribier, et.al. 1986: 14). If necessary, cattle can be driven on foot from remote places to places accessible to trucks.

As mentioned later in this chapter, coffee enabled many Hojanchan smallholders to persist during and after the cattle boom and bust. Many families have had to rely on off-farm employment, either in Hojancha or elsewhere, to supplement farm income. But even today, cattle grazing dominates the canton’s land use.
From 1963 to 1973, pastures in Hojancha increased from 50 percent of farmland to nearly 80 percent, while basic grains decreased from 22 to 10 percent (IFAM 1976: 19; Mora, et.al. 1986: 80-81). By 1973, only 11 percent of Hojancha's farmland was fallow, compared to 24 percent of Guanacaste's and 34 percent of Costa Rica's (IFAM 1976: 19). This reflects the intensive grazing which the canton's relatively small farm units resorted to, given the steadily declining terms of trade of cattle during the period.

In an effort to diversify production, Hojanchan cattle producers have largely adopted "ganado de doble propósito," or dual purpose (beef and milk) cattle with Holstein mixed into the breed. When cattle prices fell in absolute or relative terms, beginning in the late 1960s, and especially in the early 1970s, those small Hojanchan cattle farms that survived did so by increasing stocking rates from the more typical 1.1 head per hectare, the Guanacastecan average (Aguilar and Solís 1985: 5) to 1.5 head per hectare. This resulted in increased soil compaction and erosion, not to mention long-term effects: water infiltration disturbance and the seasonal drying up of the canton's streams (Calvo and Vargas 1984: 22, 26; Campos, Rodríguez and Ugalde 1993: 9). The compaction of the canton's clayey soils made cattle grazing the only viable activity. The cycle of dependency was intensified.
The landlessness that resulted from indebted Hojanchans losing their farms in the wake of unfavorable prices for cattle, created a large available labor force. The production of cattle, whose labor requirements are low, was insufficient to absorb the landless and the unemployed. Wages were driven down. Whereas peones, or laborers, before 1960 could often save part of their wages and eventually buy a small farm, wages during the cattle period were lower relative to the cost of land, making such an acquisition next to impossible (Damais, et.al. 1986: 16).

The Political Economy of Basic Grains

The basic grains sector, consisting of maize, beans and rice, is economically, socially and politically important to Costa Rican agriculture. The majority of Costa Rican farm families produce at least a small quantity of one or more of these. Smallholders produce two-thirds of Costa Rica’s maize and beans, utilizing basic technologies, while rice is mechanized and produced on larger holdings, mostly corporate farms (Morales and Villalobos 1985: 57, 75; Soto 1990: 213). Because of state policies that too frequently discourage commercial production of maize and beans, they are increasingly becoming subsistence crops to supplement incomes on the smallest of farms, whose owners must work off-farm for wages at least part time (Barahona 1980: 59-61).
Production and Marketing Characteristics

Production of basic grains is scattered throughout the country, and is generally relegated to small parcels containing the poorest soils of a given locality. The heaviest concentrations of beans are the lowlands and lower highlands of the Pacific side of the country. This includes the Nicoya Peninsula. Because most producers are smallholders who lack resources to invest in efficient production, few inputs are utilized. A production method involving the broadcasting of seeds, known as "frijol tapado," discussed in Chapter Seven, is widely practiced in Hojancha and elsewhere in Costa Rica. Few producers, including those of Hojancha, have the facilities to properly dry and store the harvest. They, therefore, are forced to sell shortly after the harvest at low prices (Hall 1985: 178-180).

Like beans, maize tends to be produced on small land parcels of 2 ha. or less with poor quality soils. Maize, however, is more widely distributed geographically, from the driest regions of Guanacaste to the wettest areas of the Caribbean lowlands, and from sea level to 2,000 meters elevation. Because maize removes soil nutrients, it is frequently produced in rotation with the leguminous beans (Hall 1985: 176).

Rice production is geographically more limited than maize and beans. Most production occurs in the lowlands of
the Pacific northwest and central Pacific regions. Half of the country's production is carried out on a small number of large Guanacastecan estates that were formerly cattle ranches. Unlike maize and beans, smallholder highland production of rice is limited (Hall 1985: 172-176). In the case of Hojancha, for example, few producers of the canton's highlands (above 500 meters) produce rice. Throughout the Hojancha Plain, however, one can commonly see small plantings, generally less than one hectare, on relatively flat land parcels.

Because grazing land during the cattle boom period engulfed so much cropland, displacing basic grains, Costa Rica has had to import significant amounts of these essential food crops (Grindle 1986: 88-90). To illustrate, in 1974, when beef exports reached $28 million (U.S.), basic grains imports were $26 million, erasing whatever gains in foreign exchange earnings beef was supposed to achieve. Since the cattle boom began, a majority and an increasing proportion of Costa Rica's agricultural imports have been basic grains, particularly maize and beans. Rice production has rebounded, due to price supports enabling large farms to intensify production through mechanization (Place 1985: 295).

State Policies Toward Basic Grains

The primary relationship between basic grains and Costa Rican state development schemes has to do with the
latter’s policies of making cheap food available to the urban-industrial and agroexport sectors of the economy (Grindle 1986: 48-50). By keeping food prices low, wages can also be kept low, making Costa Rican manufactured goods and agroexports competitive. According to the strategy, cheap food will enable laborers working in the manufacturing and agroexport sectors to comprise a market for domestically-manufactured goods (Lopez 1990: 355-356; Lappe and Collins 1978: 226). The perceived comparative disadvantage of basic grains production in the eyes of the state underlies this strategy. The policy creates, in effect, disincentives with respect to food crop production, while directly and indirectly promoting export cash crop production and the expansion of livestock grazing (Grindle 1986: 52-54; 93-95). With scarce land and resources diverted from production of essential food crops, imports of these become necessary, and the country then is vulnerable to fluctuations in world grain prices (de Janvry 1981: 160, 179-180).

The Costa Rican state carries out various taxation, pricing, investment, credit and other fiscal policies which, in addition to the market place, fundamentally influence the geography of basic grain production (Alfaro 1990: 97-100). Particularly important among state policies has been the Programa de Ajuste Estructural (PAE), or Structural Adjustment Program, a strategy designed to
control inflation and reduce the cost of labor for the purpose of making the export sector more competitive in the world market (Yoder 1991). In its execution of the PAE, the state is the mediator of a tension between the interests of the producers, desiring higher prices, and the interests of labor, desiring lower consumer prices (Soto 1990: 235).

Costa Rican development policies since the late 1940s have exhibited the typical Latin American pattern of reliance on exports of primary products to finance imported technology and capital goods for urban industrialization (del Aguila 1982: 370). Development planning has been largely "neo-liberal," emphasizing incentives for investment, the proliferation of "maquilas" or "screwdriver industries", and the promotion of agroexports, primarily coffee, bananas, and beef, to finance industrial growth (Gayle 1986: 87-91; IDB 1988: 388). Austerity measures, as elaborated within the PAE, are an important part of these development schemes.

Such policies are largely dictated by international lending institutions and development agencies, such as the World Bank, USAID, and the International Monetary Fund (IMF). Under the PAE, these institutions and their Costa Rican policymaking counterparts have called for four things: the elimination of price supports for basic grains, the convergence of Costa Rican prices of these basic grains
to international levels, boosting the efficiency of the production of basic grains, and the permitting of free market importation of basic grains (Fallas 1990: 32). These agencies impose such programs as preconditions for loan packages (del Aguila 1982: 360).

Such agencies and the state, including members of both of Costa Rica's main political parties, have maintained that the peasant sector is inefficient in food production and resistant to modernization (Mora 1990: 185; Aguilar and Solís 1988: 9). Soto (1990: 215-216, 222) argues that this assessment is unfair, because it overlooks the important productive role of campesino producers of basic grains. Farm units smaller than 5 hectares produced 83 percent of Costa Rica's beans and 62 percent of the maize, yet they represent only 2.5 percent of total agricultural land.

As Mora (1990: 185, 188-190) argues, the criticisms that these producers are inefficient misses a crucial point. The simultaneous production and consumption patterns of these campesinos justify their conservative economic and social behavior. They invest in yield-improving techniques only when they are absolutely convinced the desired outcome will be realized. Their goals are to reduce risk and maintain the family farm unit. They lack control over the market, and are not well-endowed with resources or technical information; therefore, they follow the safest path. Campesino producers of basic
grains should not be judged by the same standards of profitability as the large-scale mechanized agro-capitalist sector.

Perhaps the most important and controversial means by which policy makers have made an impact on small scale producers of basic grains is through pricing policies. At the center of these pricing policies is the CNP, which acts in accordance with the PAE. The state established the CNP in 1943, and strengthened it in 1949, to stabilize basic grain prices, in part by offsetting the lower prices at harvest time. The intention of this action was to provide security for smallholders, who lacked grain storage facilities (Seligson 1980: 123; Hazell 1991: 15; Bulmer-Thomas 1987: 95, 99; Alfaro 1990: 142). Increasingly, however, the neo-liberal goal of the CNP has been the reduction of grain prices to meet international market price levels.

The CNP has carried out its pricing policy by establishing minimum prices to producers. These price floors are determined prior to the harvest each year (Hazell 1991: 15; Morales and Villalobos 1985: 89). When the price floors are higher than international market prices, the policy acts as a subsidy. In the 1975-76 crop year, for example, the CNP launched an aggressive program involving price supports, credit, and seed improvements, to stimulate production of maize and beans. The result was
a doubling of maize output and a 17% increase in beans over the previous year. Production of both crops fell dramatically the following year when the price boost was not renewed, and since then, maize production has been insufficient to meet national demand (Morales and Villalobos 1985: 60, 62).

The policy of price supports has come under attack from "free marketeers" in the government who believe that Costa Rica should import cheaper basic grains from other Central American countries with lower labor costs, and eliminate price supports (Ribier, et al. 1986: 11). In some years, particularly since 1980, the prices to producers of one or more of these crops have been allowed to fall below international price levels (Soto 1990: 230-231). It is no wonder that Hojanchans have by and large chosen not to produce basic grains for market since 1960. They complain that for two or more decades, the prices they have received for basic grains have not increased as fast as inputs, seeds, and other production costs.

The way in which the CNP establishes prices is through its role of purchaser and seller of basic grains. In addition to price floors to producers, the CNP establishes price ceilings to consumers (Hazell 1991: 15). In any given year, between 2 and 73 percent of basic grains have been purchased from farmers by the CNP, stored in CNP silos, and sold through CNP-operated retail outlets.
directly to consumers, or sold to "pulperias" or other private grocers. Purchasing facilities are located in rural communities throughout the country, such as Mansión, 7 kilometers from Hojancha. A farmer will sell to the CNP if that agency's price is favorable compared to that which free market "intermediarios" offer, or if the CNP is the closest outlet willing to purchase a particular quantity of grains (Morales and Villalobos 1985: 69-72). Prices established by the CNP heavily influence those offered by intermediarios.

In addition to the purchase of basic grains from Costa Rican producers and sale to consumers, another task of the CNP is the importation and exportation of basic grains, to ensure adequate and stable supplies and to stabilize prices (Table 5-5). Imports of basic grains are subject to CNP-established import quotas based on the agency's estimates of Costa Rican need, which in-turn are based on domestic production estimates (Spielman 1972: 51). In the 1970s, the country imported some 24 percent of Costa Rica's maize requirements and 40 percent of its beans, while all of the country's rice requirements were met by domestic production (Morales and Villalobos 1985: 69, 83-87). Barahona (1980: 59-61) is critical of the CNP's preference to import basic grains from other Central American countries, as part of its participation in the Central American Common Market. He criticizes the strategy of importing cheap grains and
exporting manufactured food items as detrimental to campesinos who have relied for decades on production of these crops for market, and who have increasingly been unable to absorb growing rural unemployment since 1960. The state's concerns for pursuing comparative advantage clearly have a social cost.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Food Crop Imports</th>
<th>Basic Grains Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>1957</td>
<td>51.2</td>
<td>40.0</td>
</tr>
<tr>
<td>1958</td>
<td>50.2</td>
<td>39.2</td>
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<tr>
<td>1959</td>
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<td>48.3</td>
</tr>
<tr>
<td>1960</td>
<td>50.1</td>
<td>38.8</td>
</tr>
<tr>
<td>1961</td>
<td>50.1</td>
<td>42.5</td>
</tr>
<tr>
<td>1962</td>
<td>51.6</td>
<td>45.3</td>
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<tr>
<td>1964</td>
<td>68.3</td>
<td>60.5</td>
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<tr>
<td>1965</td>
<td>72.5</td>
<td>63.5</td>
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<tr>
<td>1966</td>
<td>75.8</td>
<td>65.5</td>
</tr>
<tr>
<td>1967</td>
<td>97.3</td>
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</tr>
<tr>
<td>1968</td>
<td>110.7</td>
<td>97.2</td>
</tr>
<tr>
<td>1969</td>
<td>124.9</td>
<td>110.0</td>
</tr>
</tbody>
</table>


A lesson could be learned from the fact that price support policies in the 1940s and 1950s created incentives to produce basic grains, such that Costa Rica was generally able to meet its national needs, and in some years was able to export maize (Bulmer-Thomas 1987: 164). Furthermore, in many of the grain-import seasons since the 1960s, the CNP
import quotas have been insufficient, and domestic needs have not been met (Spielman 1972: 51).

Critics of the CNP and its dual goals of stabilizing supplies of basic grains, and therefore producer and consumer prices, are incompatible. The agency is faced with the difficult task of establishing an acceptable range between consumer and producer prices (Hazell 1991: 15). Critics argue that fomenting production means higher prices to producers, and therefore price fluctuation and instability (Morales and Villalobos 1985: 90). In the past two decades, the CNP's strategy with respect to maize and beans has usually been to provide consumers with favorable prices, to the detriment of smallholders, who produce the majority of these. Rice production, on the other hand, has enjoyed greater CNP support, to the benefit of the large-scale mechanized producers who account for the majority of output. Small-scale producers have been much less able than large-scale producers to overcome consumer pressures on the CNP for lower grain prices (Morales and Villalobos 1985: 90-92).

The CNP, in carrying out the PAE, has made a direct impact on smallholder production of basic grains through credit policies and technical assistance. Seligson (1980: 123) noted that during the 1970s, less than four percent of all agricultural credit granted by the state-run banking system went to small-scale basic grains producers, many of
whom were anxious to expand their production. Almost 90 percent of the agricultural credit that decade went to farms over 200 hectares producing for export (Grindle 1986: 58). Salas (1983: 170-171) estimates that in the previous decade, the small producer (i.e., basic grains) sector received proportionally twice the amount of credit.

Austerity measures since 1978 have mandated a reduction in the availability of subsidized short-term credit to smallholder producers of basic grains. Meanwhile, long-term credit for capital equipment, such as mechanization for rice production, has increased as part of the strategy (Salas 1983: 171). Technical assistance under the PAE, likewise, has favored farms producing coffee and other agroexport crops, and only the largest farms producing basic grains, particularly rice (Chapman 1983: 261-263; Alfaro 1990: 100-101). The inputs needed to make small farms more competitive, such as fertilizers, pesticides, and improved seeds, are out of their financial reach (Lipton 1977: 288, 292).

The policies of the Costa Rican government and international lending and development agencies toward basic grains have played a definite role in the transformation of the Hojanchan agricultural landscape since 1960. Hojancha’s longest residents lament the fact that they can no longer generate income by producing maize, beans and rice for market. The canton’s younger residents and recent
arrivals simply do not bother to plant more of these crops than their households can consume. Particularly dramatic is the decrease in rice production in Hojancha. Because the state in the 1960s sponsored Green Revolution technologies in irrigated rice production, technologies which require substantial capital inputs appropriate only for large-scale production (Ribier, et.al. 1988: 10), the small scale production of rain-fed rice in Hojancha all but disappeared. In fact, even many poor Hojanchan campesinos claim it is less costly to purchase rice in pulperias than to produce it themselves as a subsistence crop for the household. Such families must face the additional burden to their already lean budgets, while the few families of the Pacific Northwest and Pacific Central lowlands that dominate large-scale rice production, processing and marketing benefit directly from these past and present state actions.

Prior to the mid-1950s, when basic grains represented Hojancha’s primary income-generating market-oriented activity, these crops were grown on the best parcels of the canton’s farms. Increasingly, however, they were displaced by the emerging cattle boom, and by policies of disincentive enacted by the state, with the blessing of multinational lending institutions. The poorest farm families, who rely heavily on production of basic grains for subsistence still dedicate the best land on their farms
Increasingly, however, basic grains became relegated to the canton’s most marginal, sloped, eroded lands, as the campesinos of Hojancha struggled to generate income from cattle, coffee, and later, forest products, which represent more reliable sources of income.

The Political Economy of Coffee

Many Hojanchan smallholders who suffered the declining terms of trade associated with basic grains and cattle since 1960 have turned to coffee production as a means of achieving economic stability. Before 1960, many small farms located above 500 meters, on the canton’s highest altiplanos and slopes, produced small amounts of coffee primarily for subsistence, and only secondarily for market. In the 1960s, events in the world coffee market, in combination with deteriorating local economic conditions surrounding basic grains and cattle (themselves the results of global and regional forces), prompted a turn to coffee as a viable alternative campesino activity. The establishment early in the decade of a coffee producers’ cooperative in Hojancha was both a response and catalyst to the market-oriented coffee production that emerged.

Like cattle production, coffee production in Hojancha experienced a boom, and has survived to the present. Unlike cattle production, however, which promoted land concentration and unemployment as it spread in the canton,
coffee production has generated significant employment, albeit seasonally, and has become a means for even the smallest of farms to achieve upward social mobility. Coffee production is an important factor underlying Hojancha's uniqueness as a smallholder stronghold within the cattle-dominated province of Guanacaste.

Global Coffee Markets

As a source of foreign exchange for the world's lesser developed countries, coffee is second only to oil (Singh, et.al. 1977: 33; Lucier 1988: 30). Though produced in and exported from several countries in Africa, Asia and Latin America, the latter realm dominates, accounting for some two-thirds of all production. Brazil alone produces between one-fourth and one-third of the world's coffee. Europe, Japan and The United States consume approximately 85 percent of the world's coffee (ICCR 1992: 8; Pieterse 1988: 14, 24). The shipping, marketing, and consumption of coffee are dominated by the developed countries of the world, far removed from the Third World producers of the coffee bean. The relationship would seem to favor the developed world, which can obtain coffee from a number of competing sources.

The two main coffee types are arabica, an upland species which is most common in Latin America, including Costa Rica, and robusta, a more widely adaptable lowland and/or warm-climate species more common in Africa and
Southeast Asia. Arabica, which has a milder flavor and less caffeine, accounts for approximately 78 percent of the world's coffee. Robusta, with its more bitter flavor, accounts for approximately 22 percent, and is the preferred type by the world's instant coffee industry (Lucier 1988: 27; Pieterse 1988: 6-7). Typically, coffee trees produce a harvestable product within three or four years after planting. Normal yields are reached two or three years beyond that. Normally, yields decline after the trees are fifteen years old, but trees can be productive for thirty years or more, if properly managed (Pieterse 1988: 6).

Coffee blending and roasting usually occurs in the country in which the coffee is consumed. Europe and the EEC, the primary coffee consuming regions of the world, utilize combinations of arabicas and robustas, so production and pricing trends for each species depend on and affect the other's production and pricing. For example, North Americans traditionally prefer arabicas, but shortages resulting from severe frosts in Brazil in the 1950s and the 1970s prompted U.S. companies to use more robusta in their blends. As coffee production has become more dispersed globally in the latter twentieth century, the processed coffee industry has simultaneously become more concentrated. That is, fewer multinational corporations are increasingly controlling more of the coffee processing and marketing (Lucier 1988: 37, 56-57).
Dependency upon coffee production is strongest for the smallest coffee farms in a given producing region. Unfavorable trends in coffee pricing and production are felt more acutely on the smallest farms less able to diversify their product base. Likewise, at the national level, the smaller coffee-producing countries with fewer alternative activities, such as Costa Rica, tend to suffer more quickly and deeply the effects of falling prices.

Underlying this dependency is the biological nature of the coffee tree. When prices are favorable, farmers respond by planting new trees and adding additional inputs to existing trees to increase output. When prices fall, however, production trends still tend to increase, because coffee trees mature in 4-5 years, and produce beans in some cases for 30 years. The continued higher output, and the stockpiling of coffee that results, undermine prices even further (Griffin 1981: 152-154). Thus, price elasticity of supply is high when prices are favorable, and low when prices fall, especially on smaller farms. Larger farms are more responsive to price decreases, because they possess the capital to diversify their activities until the crisis passes. The same principle applies to those coffee-producing countries, such as Indonesia, that rely much less on coffee than on other export crops (Singh, et.al. 1977: 31-32).
Another nature-related determinant of coffee prices is weather. Occasionally, a major frost occurs in Brazil, destroying not only the current season’s coffee crop, but the trees as well. In this case, Brazil’s output declines not for one year, but for four years, until newly planted replacement trees nearly reach maturity. Brazil’s stockpiles take up part, but not all of the slack. Coffee prices rise in the short term, to the benefit of other coffee-producing regions of the world (Lucier 1988). The favorable prices usually stimulate an expansion of coffee tree planting, which eventually results in a glut in world stocks, and a fall in prices.

Stockpiling is practiced by coffee-producing countries to stabilize supplies and prices. Brazil pursued this strategy of artificially restricting exports between 1906 and 1940, in order to boost prices. Colombia and the countries of Central America increased production in response to price increases and to make up for the fall in Brazilian output. Europe encouraged its coffee-producing colonies in Africa to increase production in the period. These events produced two long-term results. First, Brazil’s share of coffee production declined. Second, non-Brazilian coffee-producing regions of the tropics, most of which had held a peripheral place in global coffee trade, became more tightly incorporated into the global economy (Pieterse 1988: 15-16, 40-43, 58).
In 1962, consuming and producing countries established the International Coffee Agreement (ICA). High prices in 1950-54, due to effects of the Korean War and a frost in Brazil, led simultaneously to an expansion of production in the coffee-growing countries and a decrease in consumption. Prices plummeted by half in the latter 1950s. The Brazilians failed in their unilateral efforts to withhold stock, shrink global supplies, and drive up prices. Likewise, the efforts by a few producing countries, led by Brazil, to reach a voluntary agreement among all producer nations to withhold stocks failed. Finally, with the backing of Europe and the United States, and as a result of the latter's fears of the spread of Castroism throughout the hemisphere, the formal agreement was signed. Each producing country would be allocated a production quota (Lucier 1988; Singh, et.al. 1977).

The ICA has produced mixed results (Pieterse 1988: 103-105). In some years, when one or more members exceeded their quotas, the agreement broke down and had to be renewed after considerable effort. For example, prices remained high between 1963 and 1968, but fell after 1968, due to overproduction linked to the high prices and noncompliance with the agreement. The renewal of the treaty in the latter 1960s included newer, stronger penalties for non-compliance. Prices remained stable, by means of stock withholdings to adjust to production fluctuations, until a
severe frost destroyed much of the Brazilian crop in 1975, followed by floods in Colombia and political unrest in Angola (Lucier 1988: 38-50; Pieterse 1988: 65-70). Consumer prices increased 300 percent and wholesale prices increased 400 percent as stockpiles were almost instantly swallowed up by anxious consumers anticipating a further price increase. By 1980, prices had fallen again, due in part to shifts in beverage consumption habits in the United States and in part to another round of overproduction in the wake of the Brazilian crisis. This led to another implementation of the ICA.

The clever title of Lucier's (1988) volume, The International Political Economy of Coffee: From Juan Valdez to Yank's Diner, is illuminating. The global nature of the coffee industry links campesinos in coffee-producing countries, multi-national roasting and marketing companies, and consumers in the industrial world together. Decisions made in one place affect people and decisions in faraway places. The coffee producer in Hojancha is affected by the consumption habits in Europe and the United States, by political decision making in San Jose, by corporate decision making among the roasting companies, and even by the actions of multinational lending agencies. Because of the historical importance of coffee to Costa Rica and its economy, and the important place coffee holds in the national culture and ideology, state policies, perhaps more
than those at any other level in the political economy of coffee, directly affect Hojancha's coffee producers.

The Costa Rican Coffee Tradition

It is believed that coffee was first introduced into Costa Rica in 1805, and the first commercial production reportedly occurred in 1816 (Campos 1983: 11). It began as a smallholder crop and has largely remained the domain of campesinos, especially relative to other Central American countries. Coffee has enabled many Costa Rican smallholders to successfully persist (Barahona 1980: 45; Gamboa 1977: 124). Confined to the Valle Central until the twentieth century, commercial coffee production has diffused to all zones of Costa Rica at appropriate elevations. Today, more than one-fourth of Costa Rican coffee is produced in settlement zones outside the Valle Central with favorable transportation access, including the Valle General, Coto Brus, and the Nicoya Peninsula (Hall 1991: 16, 158-161). Most coffee trees are grown under planted shade trees, which protect the coffee trees and beans from direct sunlight and torrential rains. Smallholdings represent half the Costa Rican coffee farms and 17 percent of the area cultivated in coffee. Coffee is quite well adapted to smallholdings, given the labor intensive nature of the crop, and its relatively high per-hectare economic yield (Hall 1985: 158-161).
State intervention in the coffee sector commenced with the beginnings of coffee cultivation in Costa Rica. The government provided land grants to prospective coffee growers in order to expand production and generate foreign earnings. More recently, the state created the Oficina de Cafe in 1948 to give the government some control over coffee marketing and production activities, such as research. By 1961, the Ministry of Agriculture (MAG) took over the agronomic functions, while the Oficina de Cafe was given greater precedence over marketing and credit functions (Morales and Villalobos 1985: 214-215; Rowe 1963: 94-95). The semi-autonomous agency regulates prices paid to producers, the processing functions, domestic supplies, and the export of coffee by means of establishing production and price quotas, and maintaining stockpiles (Campos 1983: 48). In the late 1980s, the Oficina de Cafe was changed to the Instituto del Cafe de Costa Rica (ICCR), or Costa Rican Coffee Institute.

The marketing of Costa Rican coffee begins with a farmer delivering the harvest to a local "recibidora," or collection station belonging to one of many "beneficios," or processing plants, located throughout the country. Beneficios are privately owned or are owned by producer cooperatives. Traditionally, privately owned beneficios are investments by larger-scale planter families attempting to reproduce their capital in the processing and exporting
functions. The Oficina sets allowable processing costs as well as the commission, or profit, for each beneficio. By registering and authorizing all contracts between beneficios and exporters, the Oficina ensures that obligations under international coffee agreements are fulfilled (Campos 1983: 48; Rowe 1963: 95).

The state’s Ministry of Economy and Commerce (MEC) determines domestic coffee prices, both to consumers and to roasting companies. Prices exporters pay to beneficios are established by the free market (SEPSA 1986a: 7-8). For coffee exported, which represents, on average, 87 percent of Costa Rica’s coffee production, the producer typically receives 55 percent of the wholesale coffee price, the beneficio receives 33-36 percent, the exporter 8-10 percent, and the trader 1 percent (Morales and Villalobos 1985: 210-211). Coffee, therefore, is attractive to the smallholders of Hojancha. The relatively high percentage of the wholesale price that goes to producers is undoubtedly the result of the strong cooperative movement.

The high coffee prices of the early 1950s, resulting from frost in Brazil and global monetary instability related to the Korean War, served to launch a Costa Rican coffee boom lasting several decades. Between 1950, when disruptions in global coffee supplies began, and 1973, the area in coffee planted increased 70 percent, and output increased nearly four-fold (Barahona 1980: 45). In the

While coffee production in Costa Rica in the 1950s was characterized by changes in technology, production in the 1960s was characterized more by changes in the social character of both production and marketing. Cooperatives dominated the transformation. When world coffee prices fell sharply, beginning in the latter 1950s, smallholders were hit the hardest. Rowe (1963: 101) assessed the conditions of smallholder coffee production then:

The very small farmers are managing to keep going, but at a relatively low standard of life; their cash costs are low because they employ little or no labour, use no fertiliser, prune inadequately, etc., but their yields are also mostly very low. . . . . . (T) hose with three to five manzanas of coffee . . . are not on the whole doing well with coffee because their yields also are low, but they, like the very small farmers, have some subsistence crops. Rowe noted that the profits and living standards of largeholders were largely unaffected by the downturn in
prices. Medium-sized farms, because of their superior farming practices to smallholders, only felt modest effects of lower coffee prices.

Smallholders in the early 1960s desired to recapture the "profit drain" going to beneficios, and to work as a group, to purchase inputs in bulk. It is widely held that cooperatives have translated to success for many smallholders, especially in peripheral coffee zones such as the central Nicoyan highlands, who otherwise would not have survived (Fuentes 1986: 98; Salas, et.al. 1983: 140).

The cooperative movement first emerged in the 1940s, and was pursued as early as the 1950s by the Partido Liberación Nacional (PLN) as a social democratic institution to break the hold by traditional elites over credit to smallholder producers, coffee processing, and marketing (Cazanga 1987: 9, 98-99). In the 1950s, the State Banking System had created a department of cooperatives to direct state resources and provide credit to the cooperative sector (Salas, et.al. 1983: 140). This has subsequently strengthened. By 1960, for example, the coffee sector received more than half the credit which the National Banking System provided to agriculture and livestock (Salas, et.al. 1983: 156, 167). PLN administrations began increasing technical assistance to coffee smallholders in the 1960s (Barahona 1980: 45). By changing the nature of the smallholder-beneficio
relationship, the social democratic policies have resulted in a partial breakup of the hegemony agrobusiness traditionally enjoyed over the Costa Rican coffee industry, while still fomenting accumulation on the part of medium- and large-scale planters (Cazanga 1987: 10, 103).

In short, Cazanga (1987: 115, 258) argues that the cooperative movement has tended to promote smallholder persistence. To illustrate its rapid success, the cooperative movement accounted for less than 2 percent of all Costa Rican coffee production in 1957. Twenty years later, 40 percent of Costa Rican coffee production was received by cooperatives. Much of the increase was due to the establishment of a large number of cooperatives outside the Valle Central. These sprang up largely because of unfavorable prices of basic grains, the traditional economic activity of those subregions.

The Hojanchan Coffee Experience

The coffee cooperative of Hojancha, Coope-Pilangosta, R.L., was established in March, 1962 by 23 coffee producers, with the direct help of the Department of Cooperatives of the Banco Nacional de Costa Rica (BNCR), and FEDECOOP, R.L., the Federation of Coffee Cooperatives. Today, the cooperative has some 400 members (El Ganadero 1993b: 30-31). As a result of the formation of this cooperative and its beneficio, Hojancha's coffee producers were partially able to overcome their locational
disadvantage by retaining the beneficio profits, and pooling together to market the coffee, obtain credit, and purchase inputs. Because of the increases in coffee production which these successes promoted in the canton, Hojancha was declared a "zona cafetalera," or coffee zone, by the state in the 1960s, thereby enhancing Hojanchan coffee farmers' access to credit from the BNCR (Guadamuz 1993). Smallholder coffee-producing families in the highland communities of Monte Romo, Huacas, Maravilla, and Pita Rayada express their enthusiasm toward Coope-Pilangosta and the degree of security it has provided them since the early 1960s. Most of these farms are too small for cattle to be a viable option, and none can produce a livelihood through basic grains.

Prior to the establishment of the cooperative, and despite the dramatic global stimulus to coffee production in the early 1950s, only small quantities of coffee were produced commercially in the canton. The establishment of three small beneficios in the 1950s in the Nicoyan highlands, two of which were in Hojancha, was linked to the higher prices early in the decade. The relative isolation of the region, and its poor roads, served to delay the increases in output and productivity the region eventually would experience, after the establishment of the cooperative (Hall 1991: 123, 131, 132, 142, 162; Damais, et. al. 1986: 17).
When coffee prices were again favorable, in the 1960s, production expanded in Hojancha's highlands, which by then were better served by roads (Damais, et al. 1986: 17). Due to the efforts of the local priest, and his ties to the PLN in San Jose, all-weather improvements were made to the crude oxcart paths that linked these highland areas with the towns of Hojancha, Mansión and Niocya. Small- and medium-sized farms increasingly diversified their activities and planted small areas of coffee at first, and later expanded the total area. As Damais, et al. (1986: 17) and Ribier, et al. (1986: 18) point out, for the smallest farms of Hojancha's highlands, coffee represented then, as now, a way of maximizing economic returns to land, and occupying family members to a much greater extent. Farms larger than these have become petty-capitalist, as they hire labor seasonally and generate sufficient capital to reinvest in maintaining their coffee trees and even boosting their output.

Since the mid-1970s, coffee production in Hojancha has fluctuated, largely mirroring national trends. Some coffee producers indicated they initially decided to produce coffee, or expand existing coffee parcels, in the mid-1970s. This coincides with the major Brazilian frost of 1975 that drove up prices globally, and resulted in a 34-percent increase in Costa Rican coffee production between 1976 and 1979 (Campos 1983: 49). Between 1985 and 1988,
some 200 additional hectares of coffee trees were planted in Hojancha and the neighboring canton of Nandayure, the result of a joint USAID-FEDECOOP venture (Guadamuz 1993).

Officials of Coope-Pilangosta lament the sluggish Hojanchan output since the late 1980s, due to a combination of rust blight and unfavorable world coffee prices. These officials are hopeful that an agreement recently reached between a progressive European development foundation and all eight of Guanacaste’s coffee cooperatives, in which the former will market the latter’s coffee in Europe, will result in enhanced profits for Hojancha’s coffee producers. The efforts that went into establishing this relationship exemplify the role of agency in the contemporary process of Hojanchan regionalization, and are discussed more fully in Chapter Seven.

Conclusions

The relative success which Hojanchans experienced with coffee in the 1960s and 1970s, though important, was not strong enough to stem the massive emigration from the canton following land degradation and the shift to cattle production. By the early 1970s, Hojancha had experienced the highest rate of emigration in northwestern Costa Rica, a region accustomed to emigration because of its cattle-dominated economy. According to population census data, between 1963 and 1973, Hojancha lost 57 percent of its
population. Unemployment was high even among those who did not emigrate (Campos, Rodríguez and Ugalde 1993: 9).

A study by IFAM, or Instituto de Fomento y Asesoría Municipal, of 860 rural communities in 56 Costa Rican cantones in 1974-1976, revealed that Hojancha and Nandayure presented the least opportunities for employment of all Costa Rican cantones. At the time of the IFAM study, the percentage of Hojanchans employed was below the national and Guanacastecan averages. Nearly three out of four paid farm workers received less than 400 Colones a month, the designated poverty line. This compares to 42 percent of all Costa Rican rural workers and 57 percent of Guanacastecan rural workers (IFAM 1976: 11-16).

The social deterioration of Hojancha was the outcome of a conjuncture of several related, mutually reinforcing issues. The increased reliance on cattle production, landlessness, environmental degradation, unemployment, emigration and the abandonment of commercial production of basic grains were linked not only to each other, but to international marketing trends of the region's commodities, and state responses to the debt crisis. The loss of land and the rate of emigration were highest among the numerous small farms of Hojancha, less than 20 hectares, below the feasible elevation for coffee production. These farms were too small to profitably graze cattle (Damais, et.al. 1986: 17).
Hojancha's rather sudden switch to market-oriented production of cattle coincided temporally with the demise of market-oriented production of basic grains. International beef markets strengthened, while Costa Rica appeared to have a comparative disadvantage at producing maize and beans. Thus, both events were largely, but not exclusively, market-driven. State intervention in both sectors, including pricing policies for basic grains (advantageous to urban Costa Ricans, but disadvantageous to campesinos), and subsidized credit and infrastructure for cattle, played an important role in the shift. Likewise, environmental factors proved influential. Continual grazing and clearing of land for pasture rendered many of Hojancha's soils useless for maize and beans.

The increase in coffee production from the early 1960s onward was both market-driven and politically-driven. It was a response to favorable global demand and to social democratic efforts to improve prices to producers. While aggregate income at the cantonal level was raised from cattle and coffee, only a minority of Hojanchans were affected. Largeholders and highland farm owners benefitted disproportionately. Negative social costs were borne by the majority of Hojanchans.

The catastrophe of poverty, environmental degradation, and emigration, which occurred only 30 years after the canton's immigration peak, prompted local residents to take
action. Spearheaded by the local priest, community leaders undertook a series of measures to promote development in the canton. These measures, discussed in Chapters Six and Seven, included among others the formation of Hojancha as a separate canton, the lobbying of the state for resources for infrastructure and social programs, the formation of the Cantonal Agricultural Center of Hojancha (CACH), and the successful solicitation of credit and donations for improving the coffee sector. Perhaps the most dramatic example of human agency in Hojancha, of a transformation not only of the canton’s landscape and economy but also its psyche, was the region’s adoption of forestry. It is argued in the remaining chapters that forestry, more than any other activity, underlies Hojancha’s contemporary regional restructuring and regional identity.
CHAPTER SIX
THE EMERGENCE OF HOJANCHAN SMALL FARM FORESTRY IN THE 1980s

In the latter 1970s, Hojanchan community leaders, including the president of the municipality, the president of the technical high school (colegio tecnológico), and the local priest, identified forestry as a desirable cornerstone of future Hojanchan development. This was a response not only to environmental degradation in the canton, but also to state efforts to promote reforestation through financial incentives and increasingly favorable market conditions for forest products (Villasuso 1978; Gallardo 1991). The latter was a result of state development strategies emphasizing industrialization, and a related construction boom, from the late 1950s onward.

Many of the canton's smallholders, as well as its community leaders, increasingly viewed their community as an important participant in the country’s growing reforestation activity from the mid-1970s onward (Ortiz Monge 1992). However, as one Hojanchan put it, it has been difficult in many cases convincing the community’s smallholders to plant trees. After all, it was the campesino sector that for many decades cut trees down to expand farmland and pasture as part of the community’s twentieth-century settlement process.

This chapter provides descriptions of the forestry-related activities of the canton. There exist two distinct
activities, reforestation and tree seedling production. Each of the two has its own underlying characteristics with respect to markets and state intervention. Of the two, reforestation has served to stimulate more international interest in Costa Rica. Seedling production, a backward linkage to reforestation, has generated attention toward Hojancha on the part of Costa Ricans. Seedling production in Hojancha was stimulated by the reforestation there. On a national scale, however, seedling production remains a relatively limited activity, while reforestation has become a widespread activity of interest to international development and lending agencies.

The forward and backward linkages to reforestation are identified in this chapter, as are the main species of trees and seedlings utilized in Hojancha. Political and economic forces occurring at multiple scales are described, including state policies with respect to deforestation and reforestation, and market conditions of the products of the different production stages: seeds, seedlings, logs, timber, pulp, furniture and construction materials. The agroecologic characteristics of each species and activity are described insofar as they affect producer decision-making and the human landscape of the study area.

Guanacaste is a leading province in both reforestation and seedling production (Gallardo 1991; Ortiz Monge 1992: 32-33). Ironically, the province has also experienced the
highest rate of deforestation in the twentieth century, in large part a result of the province's deepened participation in global beef markets (SEPSA 1986: 191). Within the province, which accounts for one-fourth of the country's reforestation and more than half the country's seedlings, Hojancha is the canton with the highest concentration of forestry-related activities. According to a country-wide survey of regional forestry offices of the DGF (Dirección General Forestal), conducted as part of this dissertation research, Hojancha now produces nearly half of Guanacaste's and nearly one-fourth of the entire country's hardwood seedlings. In previous years, these forestry activities were more highly concentrated in the region, but have subsequently diffused to other regions of the country (Rodríguez 1993). Still, CACH officials estimate that some 60 percent of the canton's workforce is employed at least part time in forestry each year (Comunidades 1990: 11).

The Political Economy of Small Farm Forestry: State Policies, Finance and Markets

Since 1960, the Costa Rican government has stepped up its efforts to reduce the rate of deforestation in the country and promote reforestation. Despite the overtures, Costa Rica has one of the highest rates of deforestation in all of Latin America, on average 3 percent annually since 1950. Some two-thirds of the country's original forest cover has been cleared (Panayotou and Ashton 1992: 23).
Each year, the percentage of remaining forest that is cut increases (SEPSA 1986: 50). The continued environmental degradation has prompted the state to promote reforestation through incentives and other financial offerings attractive to smallholders and agribusiness alike.

Cattle ranching has contributed more than any other activity to deforestation in Costa Rica and elsewhere in Central America (Shane 1986: 4). Porras and Villarreal (1986: 12-13, 34) argue that although the campesino is frequently blamed for deforestation in Costa Rica, it is in reality the country's particular model of capital accumulation, based on exports of beef and other primary products, that is the greater cause. The declining terms of trade which these export products have experienced have led to expansion of their production at the expense of forests. Forestry-related legislation has often legitimized the deforestation accompanying such "development." The reality of low prices for forest products precludes proper forest management, particularly in the realm of utilization of felled timber. The low level of technology in forest extraction translates to destruction above and beyond the desired harvest. Finally, the lack of a forestry tradition, that is, an appreciation for preserving forests on the part of the public, is an important factor underlying rapid

State Policies Toward Forestry

The earliest law related to deforestation came in 1942. The state mandated that not all trees on a given parcel of farmland could be removed, but some had to remain. The José Figueres Administration in 1950 established the Department of Lands and Forests within the Ministry of Agriculture (MAG). The department's primary function was to protect aquifers and other water resources of primarily the central highland region of the country, by limiting deforestation in areas where it would threaten watersheds (Sanchez and Oviedo 1989: 6).

The Joaquin Trejos Administration sought to reinforce this type of protection by implementing the Forest Law (Ley Forestal) No. 4465 in 1969 (Salas 1983: 169). The law allowed for the granting of permits or concessions by the state for timber extraction from state lands. Under the law, the DGF would be required to approve extraction of timber from private land. In effect, the DGF was given authority to block deforestation around springs and on steep slopes (Porras and Villarreal 1986: 38-40). Forest Law No. 7174, which took effect in 1990, more explicitly defined the role of the DGF in prohibiting the cutting of forest on private and state land without official permission. The DGF is supposed to examine a site to
determine if timber extraction is feasible (Nygren 1993: 77).

Porras and Villarreal (1986: 38-40) are critical that Laws 4465 and 7174 have actually promoted deforestation by enabling the DGF to issue large timber concessions and extraction permits to corporate interests involved in activities such as timber exporting. For example, in 1991, nearly 4,000 permits for log cutting were issued by the Rafael Calderón Administration. Over half the timber authorized for extraction came from state forested lands. Less than half came from private farms (Lizano González, et.al. 1993: 39). In addition to deforestation permitted by the state, unauthorized (illegal) deforestation, estimated to be more than the authorized amount, occurs (SEPSA 1986: 106; Porras and Villarreal 1986: 49). It is not known what portion of this cutting meets campesino household fuel and construction needs, and what portion accompanies commercial activities, such as logging and pasture expansion. Campesinos who illegally cut trees undoubtedly react to what Nygren (1993: 79-81) identifies as the anti-campesino bias of Law 7174. Her ethnographic fieldwork uncovered many instances of the DGF forbidding campesinos to cut wood for construction materials, while huge logging trucks carried their frequent, full loads to sawmills.
In response to deforestation throughout Latin America, various state policies have been implemented to foment the creation and expansion of tree plantations. By 1980, some 6 million ha. of plantations of mostly hardwoods had been established. By the year 2000, an estimated 11 million ha. will be in existence, accounting for the majority of Latin American industrial wood production (Sedjo and Lyon 1990: 45-46).

In Costa Rica, about 50,000 ha. of plantations had been established by 1990, and the amount of reforestation is increasing each year, according to DGF data. The activity involves the production of timber species, many of them exotic, as cash crops. The original forest is not replaced. The area reforested annually is now approximately 20 percent the area deforested, compared to only ten percent in the early 1980s (Panayotou and Ashton 1992: 31). The total area in tree plantations in Costa Rica is still less than one percent of the total cumulative area of forest loss, however. Reforestation tends to be concentrated in Guanacaste, a province highly deforested in previous decades due to the expansion of cattle production. Thirty five percent of Costa Rica’s accumulated reforestation has occurred there (Ortiz Monge 1992: 32-33, 93; SEPSA 1986: 50). Two main hardwood types are included in the plantations of Guanacaste, and Hojancha in particular, including fast-growing hardwoods appropriate
for pulp, wood chips and firewood, such as melina (*Gmelina arborea*) and slow-growing, high-density hardwoods appropriate for high quality wood products, such as teak (*Tectona grandis*) and pochote (*Bombacopsis quinatum*). Slow-growing, denser hardwoods are much less common in plantations throughout Latin America (Panayatou and Ashton 1992: 171-173).

The recent reforestation boom in Hojancha is for the most part the result of the latest versions of fiscal incentives offered by the state to foment that activity. The state has offered incentives that range from tax deductions to all out cash payments, though only recently have they been directed at small-scale producers (Sánchez and Oviedo 1989: 38). Under Law 4465, enacted in 1969, the Trejos Administration mandated that at least five percent of the land area of every farm greater than five ha. be planted in trees. In addition, the law permitted all costs of reforestation to be deducted from income taxes (Porras and Villarreal 1986: 72-73, 77). A maximum of 100,000 Colones per ha. could be deducted, spread out over five years, beginning with 60 percent the first year, 15 percent each of the second and third years, and 5 percent each of the fourth and fifth years (Ortiz Monge 1992: 89-91). The policy did not favor smallholders, whose tax liabilities were less than the costs of reforestation.
In 1977, the Law of Reforestation was enacted, which strengthened reforestation incentives under Law 4465. Income tax deductions were expanded to include the planting of any and all trees (not just reforestation) and the associated costs of credit (Porras and Villarreal 1986: 79-80). In addition, the law exempted from taxation any income from the sale of wood or other forest products involved in reforestation, including seedlings (Sánchez and Oviedo 1989: 11).

The Rodrigo Carazo Administration (1978-82), which established five regional state-run nurseries to produce seedlings from reforestation, implemented an incentive program to supplement the tax break policies. Incentives of 15,000 Colones per ha. were paid directly to reforesters. The program was directed toward establishing reforestation only in specific areas, particularly in the Valle Central, that the administration felt were environmentally sensitive, but which would not conflict with cattle production. The Nicoya Peninsula, for example, was not included. The law also stipulated that the National Banking System provide at least 2 percent of all its agriculture- and livestock-oriented credit at low interest rates to reforesters (Porras and Villarreal 1986: 82-83). During that administration, 2,266 ha. were reforested, 87 percent of which was financed by incentives,
subsidized credit, and/or tax breaks (Sánchez and Oviedo 1989: 15-16; Salas, et.al. 1983: 172).

Criticisms of these policies are basically two-fold. First, only large-scale producers, such as logging companies, could generate enough income and income taxes from which to deduct all costs of reforestation. In effect, these tax deductions served as tax shelters for multinational businesses, many of which engaged in forestry explicitly for that purpose. After first receiving tax breaks and subsidized credit, several companies subsequently sold land parcels, pocketing huge profits. The state has since revised the law by placing a limit on the amount of tax deduction of 25 percent of the tax liability, and preventing any one recipient of subsidized reforestation credit from receiving more than 1 percent of all such credit from the National Banking System (Porras and Villarreal 1986: 82-83). Second, many environmentally fragile areas outside the Valle Central were bypassed by Carazo's incentive program (Sánchez and Oviedo 1989: 15-16).

The Alberto Monge Administration (1982-86) attempted to foment reforestation by promoting wood industries, creating more state-run nurseries, and expanding the incentive program. Believing that the development of forward linkages would promote reforestation, the administration undertook marketing studies and provided
technical assistance to the wood industries sector to increase efficiency. Incentives were raised first to 50,000 Colones per ha., and later to 70,000 Colones per ha., and were directed in part toward previously bypassed environmentally sensitive areas outside the Valle Central. The incentives were successful, resulting in 7,956 ha. of reforestation during Monge's tenure, nearly four times that of Carazo's tenure (Sánchez and Oviedo 1989: 18-20).

According to a census of sawmills, however, the efforts to boost forward linkages were disappointing.

In addition to boosting incentives from 70,000 Colones per ha. to 90,000, the Oscar Arias Administration (1986-90) attempted to increase reforestation by mandating that at least 10 percent of all lands redistributed through IDA, the Agrarian Reform Institute, be devoted to reforestation. The National Assembly provided IDA 25 million Colones of the 90 million the agency requested for that purpose. The incentive increases proved successful, as reforesters for the first time were paid a profit of approximately 20,000 Colones per ha. above and beyond the planting costs (Sánchez and Oviedo 1989: 24-26). According to DGF data, nearly 13,000 ha. were reforested in the two-year period 1987-88.

Efforts by the Monge and Arias Administrations to solicit financing for reforestation from a number of international financial institutions were successful. In
1985, the Inter-American Development Bank (IDB) introduced a financial project for reforestation, including low interest loans for planting and the improvement of wood processing. The United States Agency for International Development (USAID) instituted a program including low interest loans with extensive grace periods for reforestation (SEPSA 1986: 104). By 1986, these international agencies were involved in the financing of 1,672 ha. of reforestation. In 1989, USAID and the Dutch and Swiss governments converted $36 million (U.S.) of Costa Rica's external debt into forestry incentives for small and medium farms and research funds. At that time, the DGF, formerly part of MAG, became part of MIRENEM, the Ministry of Natural Resources and Mines (Sánchez and Oviedo 1989: 21, 26-28).

At present, there are four forms of reforestation incentives in Costa Rica: 1.) Article 87 of the Forestry Law; 2.) CAF, or Certificado Abono Forestal (Forestry Payment Certificate); 3.) FDF, or Forestry Development Fund; and 4.) "CAF Individual" (Nichols 1993: 6-7; Lobo 1993; Valverde 1993).

Article 87, which was implemented in 1988, requires that reforesters finance their own reforestation, but permits the deduction of the reforestation costs from income taxes. In addition, Article 87 exempts reforesters from property taxes and taxes on the profits generated from
the sale of the timber. Large companies with sufficient capital to finance large parcels of reforestation participate in this incentive.

CAF is designed for smallholders, and finances a maximum of 5 ha. of reforestation per farm. Incentives under CAF amount to 85,000 Colones per ha. for the producer, and 15,000 per ha. for the local agricultural center (such as CACH in the case of Hojancha) that administers the program locally. The payments are disbursed over a five-year period, starting with 50 percent the first year, 20 percent the second year, 15 percent the third year, 10 percent the fourth year, and 5 percent the fifth year. IDB provides the Costa Rican state a low-interest rate loan for the CAF incentive payments.

FDF is designed for smallholders who reforest up to 5 ha., but who lack sufficient title to their land. DECAFOR, the Campesino Forestry Development branch of DGF, oversees the incentives and extension services that accompany the program. Under FDF, the producer receives 66,000 Colones per ha. and the local agricultural center receives 9,900 per ha. for administration costs. The funding disbursement schedule is the same as that of CAF.

"CAF Individual" is for reforestation of parcels greater than 5 ha. The source of this funding is not IDB, but the state. Incentives under CAF Individual pay the producer 120,000 Colones per ha. under the same
disbursement schedule as CAF and FDF. Larger-scale reforesters who lack sufficient capital to finance their own reforestation, and who, therefore, do not qualify for Article 87, participate in CAF Individual. Like CAF and FDF participants, they pay taxes on profits made on the sale of timber.

CAF represents the first time in Costa Rican history that the small producer has benefitted directly from state forestry policies (Sánchez and Oviedo 1989: 38). Multinational corporate beneficiaries of tax breaks under Article 87, such as "Ston Forestal" (a division of Stone Container), Scott Paper, "Flor y Fauna" (a Dutch-owned company) and others clearly benefit the most from state forestry policies. However, the smallholder desiring to reforest finally has a rare opportunity to receive state subsidies. The CAF program is by far the single most important reason that Hojanchan campesinos reforest. Ortiz Monge (1992: 131-32) laments the fact that the state will not be able to support CAF indefinitely, as evidenced by its plans to substitute the program at a later date with plain credit and a modest National Fund for Forestry Financing.

Global Markets for Forest Products

Incentive payments and other forms of financing are not now, nor will not be, the only determinant of the successes of reforestation in Hojancha or anywhere else in
Latin America. The forward economic linkages to reforestation, that is, the development of wood products industries and markets for forest products, are of great importance. Recent and predicted future trends in global trade in general, and Costa Rican trade in particular, of tropical hardwoods suggest that markets for Hojancha's timber products will develop at a slow but steady pace, at least in the short term. Barring any major global economic recession, the forward linkages to tropical reforestation show promise. The backward linkages, however, such as seedlings, do not appear as promising, as is discussed later in this chapter.

Since World War II, a major shift in the global wood trade has developed. No longer are tropical countries limited to exporting logs of high quality, decorative, furniture-grade wood to the industrialized countries. Industrialized countries increasingly import lower grade hardwoods and products made from these hardwoods, such as panels, lumber and plywood (Takeuchi 1985: 433). Imports of tropical hardwoods have levelled off in Japan, Europe and North America, but continued growth in imports by China and other "newly industrializing" countries (NICs) of Asia and the Middle East account for the increasing levels of tropical woods in the global wood trade (Panayotou and Ashton 1992: 29-30). Another important shift is the increased domestic consumption of wood products within
tropical countries, especially in Latin America, following post-War industrialization and construction booms there. In industrialized countries, substitute products, such as plastics, aluminum and plywood and particleboard made of temperate-zone softwoods, have contributed to the levelled demand for tropical wood products. Today, more than 80 percent of sawn wood produced in the tropics is consumed within the country of origin (Ewing and Chalk 1988: 6-9, 29).

Latin America produces over 20 percent of the world's tropical hardwood. Its 3.4 percent annual production growth rate is the highest in the world (Takeuchi 1985: 440). Within Latin America, the sources of wood products for both export and domestic use are increasingly plantations of hardwoods and decreasingly natural rain forests. This trend is linked to the difficulties of efficiently extracting a desired species from the heterogeneous forests without damaging neighboring trees (Sedjo and Lyon 1990: 28-29). It suggests that market prospects for plantation-grown wood in Latin America are favorable, and especially for fast-growth species utilized in the fast-growing wood panel and paper products sectors of global trade.

Tropical countries can produce forest products more cheaply than can industrial countries, although much of the cost savings is eroded by the costs of shipping bulky wood
products such great distances (Ewing and Chalk 1988: 1-2). For that reason, the U.S. will likely remain the number one industrialized importing country of Costa Rican and other Latin American exported wood products, especially sawn wood and panels. Likewise, the U.S. will continue to import most tropical hardwood from Latin America, the closest tropical realm. Panayotou and Ashton (1992: 29) speculate that by the year 2000, Latin America will have surpassed Asia and Africa in production of sawn hardwood, due to the great depletion of hardwood stocks in Asia and Africa, and the rapid increase in plantation production of fast-growing hardwoods in Latin America that are easy to harvest and generate a quick economic return.

Much of Latin American plantation hardwood timber production is of low grade and used for pulp. Because of the depletion of high grade hardwood from natural forests throughout the tropics, and the sustained global demand for this product type, an increase in the production of sawn wood ultimately grown on plantations is a recent feature of Latin American timber production that is expected to continue (Sedjo and Lyon 1990: 46; FAO 1979: 16).

In sum, global market linkages for sawn hardwood are well developed, especially between Latin America and North America. Trade barriers are modest for the most part (Sedjo and Lyon 1990: 56). Demand for sawn hardwood is increasing within the tropics and in "newly
industrializing" countries. These trends suggest a bright future for plantation production of tropical hardwoods. Somewhat tempering these positive trends, however, are the periodic recessions that create slowdowns in demand for construction materials in industrialized and developing countries (Takeuchi 1985: 441), and the increased usage of plastics, softwood-based particle board and other substitutes. This latter trend has played a key role in the post-1950 slowdown in price increases for tropical industrial (sawn) woods. Between 1950 and 1985, prices increased on average 0.34 percent annually, only one-third the rate they increased between 1900 and 1950 (Sedjo and Lyon 1990: 60-64). Much of the increase during the entire 1950-85 period occurred during the oil crisis of the early 1970s (Takeuchi 1985: 445). Furthermore, patterns of dependency that characterize the marketing of tropical hardwood, that is, the concentration of marketing into the hands of a few firms of the developed countries (Takeuchi 1985), will remain, given the bulky nature of the product.

Costa Rica and the World Forest Products Economy

Since 1975, Costa Rica has been a net-exporter of forest products (BCCR 1993; Villasuso 1978: 164). Between 1984 and 1992, for example, exports exceeded imports by about 4-to-1 (Table 6-1). Exports are dominated by manufactured wood products, such as veneers, plywood, particle board and furniture. Raw materials play a much
less important role in terms of the value of forest products exported. For example, pulp represents only 20 percent of forest product exports, even though pulp exports are nearly twice pulp imports. Logs and rough-cut wood together represent only 3.4 percent, a negligible portion indeed, of forest product exports. The U.S. and El Salvador are the top two recipients of forest product exports overall. Interestingly, the vast majority of lumber is not exported, but is utilized in domestic construction and manufacturing. Of the 11 million cubic meters of Costa Rican lumber produced between 1967 and 1990, 61,000 cubic meters, or 0.6 percent, was exported (FAO 1980; FAO 1990).

<table>
<thead>
<tr>
<th>YEAR</th>
<th>TOTAL IMPORTS (X $1,000)</th>
<th>TOTAL EXPORTS (X $1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
<td>872</td>
<td>5,105</td>
</tr>
<tr>
<td>1985</td>
<td>1,057</td>
<td>4,054</td>
</tr>
<tr>
<td>1986</td>
<td>1,244</td>
<td>6,336</td>
</tr>
<tr>
<td>1987</td>
<td>1,786</td>
<td>8,033</td>
</tr>
<tr>
<td>1988</td>
<td>1,124</td>
<td>11,689</td>
</tr>
<tr>
<td>1989</td>
<td>2,259</td>
<td>15,351</td>
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<tr>
<td>1990</td>
<td>3,772</td>
<td>13,855</td>
</tr>
<tr>
<td>1991</td>
<td>3,715</td>
<td>11,919</td>
</tr>
<tr>
<td>1992</td>
<td>6,876</td>
<td>14,102</td>
</tr>
<tr>
<td>TOTAL</td>
<td><strong>22,704</strong></td>
<td><strong>90,442</strong></td>
</tr>
</tbody>
</table>

Wood pulp represents 40 percent of the value of imported forest products, followed by plywood, lumber, and other manufactured construction materials (BCCR 1993). The primary sources of imports are the U.S., Nicaragua, and other Central American countries (Ortiz Monge 1992: 98).

Costa Rican Forestry and Forward Linkages

Forestry began to show signs of becoming an important commercial activity in Costa Rica beginning in the late 1950s. As a portion of the value of national agricultural production, forestry increased from 2.5 percent in 1957 to 4 percent in 1978, and it levelled off to 3.8 percent in 1985 (Ortiz Monge 1992: 4; Villasuso 1978: 157). Though seemingly overshadowed by other agricultural and livestock activities, forestry is holding an increasingly important place in Costa Rica's industrialization and economy.

Between 1957 and 1975, annual timber production increased 130 percent, from 255,686 to 588,607 cubic meters, and the number of sawmills nearly doubled (Porras and Villarreal 1986: 22-24; 29-30). The contribution of forestry and forest products to the gross domestic product increased nearly six-fold between 1976 and 1987, from 790 million Colones to 5,363 million Colones (Ortiz Monge 1992: 71). However, in the 1980s, wood products represented only one percent of Costa Rican exports (Ortiz Monge 1992: 80), a further indication of their domestic importance.
A leading sector of the Costa Rican economy utilizing wood products is housing construction, and particularly the subsidized housing program begun under the Oscar Arias Administration in the late 1980s. In 1991, for example, four-fifths of Costa Rican sawn wood was used in housing construction. ICE, the Costa Rican Institute of Electricity, which provides the country with that energy source, is the largest single purchaser of wood, for use in hydroelectric plants, geothermal projects and other infrastructure. In housing and other forms of construction, softer, low-grade woods are preferred, because they cost less and can be more easily cut on the construction site than higher-grade hardwoods. The construction sector consumed some $75 million worth of lumber in 1992 (Lizano, et.al. 1993: 53-55, 62-63).

A growing sector of Costa Rican exports are products manufactured from low-grade hardwoods that compete against similar products made from softwoods in industrial countries. Costa Rica ranks third among all developing countries of the world in exports of particleboard, a product that increasingly competes directly with plywood in world markets. Costa Rica, for example, exported 8,000 cubic meters in 1982, or 11.1 percent of total Third World exports of that product. Costa Rica is the tenth largest exporter among developing countries of plywood. In 1982, for example, it exported 11,000 cubic meters of plywood.
made of low-grade hardwood, which competes with the U.S. and other producers of softwood plywood. Costa Rica is the seventh largest exporter among developing countries of fiberboard, a substitute for thin plywood or particleboard (Bethel and Tsing 1986: 26-34).

A potential growth sector for Costa Rican domestic production is paper products. Costa Rica exports more pulp than it imports, but it is a net importer of paper products manufactured from pulp. For example, the country ranks second among developing countries in imports of paper for packaging and cardboard (Bethel and Tsing 1986: 16, 46). Paper in the Costa Rican case appears to exemplify a global trade pattern that dependency theorists criticize: the tendency for developing countries to export raw materials to industrialized countries, and import back from the industrialized countries more expensive goods made from those raw materials (Kay 1989). Many of the melina seeds and seedlings Hojancha produces are sold to Ston Forestal, Scott Paper, and other multinational reforesters that export melina pulp produced in Costa Rica's southern Pacific former banana zone, to the U.S. for manufacture of paper products (Murillo and Valerio 1991: 12).

Another potential growth sector of forest products for subregions of Costa Rica developing the appropriate forward linkages, is sawn hardwood. The interest in reforestation that emerged in Hojancha in the mid-1970s was one outcome
of the 26 percent growth in sawn wood production, and the 45 percent increase in commercially felled timber, in Costa Rica during the short period between 1967 and 1975 (Porras and Villarreal 1986: 31-32). Production of sawn wood has subsequently levelled off, but still appears lucrative to Hojanchans.

While particleboard and plywood increasingly are displacing traditional lumber in construction, no such large-scale substitution is occurring in the furniture and related industries that demand high quality lumber (Lizano, et.al. 1993: 61, 63). Furthermore, teak and other high grade hardwood species face increasing demand in the industrialized countries, whose own (temperate species) hardwood production has levelled off in recent years (Bethel and Tsing 1986: 22). Though still a small-scale export activity, Costa Rican teak lumber can yield prices of $1,300 per cubic meter on the world market (Ortiz Monge 1992: 112, 132).

In addition to the particleboard factory and the two plywood factories identified in a 1987 Costa Rican forest industry census, there were 161 sawmills across the country (DGF 1988). The number of sawmills has declined somewhat from a peak of 204 in 1980. According to a study by Lizano, et.al. (1993: 35-36), 145 sawmills remained in 1990. The particleboard and plywood factories are located in the Valle Central, close to the major markets. Because
sawmills are located close to the supply of logs, nearly one-third are in Alajuela, the province in which the San Carlos Plains timber region is located.

The decrease in the number of sawmills is not the result of a decrease in sawn wood output, but is related to a concentration of the activity into fewer hands. The latter trend is in large part the result of higher costs of raw materials and the additional need for capital to obtain them. The output of sawmills has in fact increased, from 356,000 cubic meters of lumber in 1986 to 410,000 cubic meters in 1991 (Lizano, et.al. 1993: 48). This corresponds to a more-or-less stable level of consumption of logs by sawmills, 741,294 cubic meters in 1986 and 759,292 cubic meters in 1991. Increases in output are due in part to decreases in waste in the sawing process: in 1986, 52 percent of the log bulk was wasted; in 1991, 46 percent was wasted (Lizano, et.al. 1993: 45; DGF 1988: 51).

In sum, Hojanchans participating in reforestation now and in the future will be affected by trends in construction and furniture-making, two industrial sectors that make heavy use of sawn wood, and lumber exports, an activity that is expected to increase as hardwood supplies dwindle elsewhere in the world. The health of these sectors, and especially construction, which consumes 80 percent of Costa Rican sawn wood, is tied directly to the state of the national and international economies:
inflation, credit availability, and demand for housing and other buildings (Lizano, et.al. 1993: 53). Already, by the late 1980s, nearly 90 percent of industrial felled logs in Costa Rica were used to manufacture sawn wood in the country's sawmills (DGF 1988: iv). Only about 10 percent were used in the manufacture of such products as particleboard, match sticks and pulp.

Of particular interest to reforesters of Hojancha and elsewhere in Costa Rica is the growing percentage of wood cut by sawmills that originates in plantations, as opposed to trees felled in heterogeneous old-growth and secondary regrowth forests. Whereas in 1990, when tree harvests from plantations financed by incentive programs were just beginning, only 3 percent of the wood cut in sawmills came from plantations. By 1991 and 1992, plantation-grown logs represented 9.5 and 13 percent, respectively, of the wood cut by Costa Rican sawmills (Lizano, et.al. 1993: 50). Ortiz Monge (1992: 6) speculates that, given the current high deforestation rates and the relatively high amount of waste in the sawing process, significant importation of wood may become necessary in the not-too-distant future. This problem could, of course, be rectified in large part by significant increases in plantations of hardwood.
Reforestation in Hojancha: Species Selection
Criteria and Ecological Characteristics

In many ways Hojancha has been a showcase for small-scale reforestation in Costa Rica. It was among the first localities of the country to embrace small farm forestry, even before 1988, when the CAF program commenced. According to unpublished figures from CACH and DGF, in 1988, of the 368 Costa Rican small-scale reforesters participating in CAF, 92 (25 percent) were located in Hojancha. Hojanchans that year accounted for one-third of the 921 ha. reforested across the country under CAF. Eleven years before CAF, Hojanchans began planting trees, largely with their own funds or by taking out loans from CACH, at low interest rates and backed by IDB and the state. During the 11 planting seasons from 1977 to 1987, 121 Hojanchans reforested 212 ha.

According to the CACH officials who promoted the activity, it was not easy at first to convince campesinos to invest their funds, or commit to taking out loans, to plant trees. CACH sponsored several "charlas," or discussions, and workshops to influence public attitudes toward reforestation as a viable land use in that hilly, largely deforested region. The organization established several demonstration plots along heavily travelled roads in the northern half of the canton for all to see. A community nursery was established in 1977 adjacent to the
CACH office on the outskirts of the town of Hojancha, where tree seedling stocks could be built up and then sold at cost to reforesters.

Before the existence of the CAF and FDF incentive programs, Hojanchan reforesters had to be convinced not only of ecological benefits of the activity, but of the economic viability as well. The rapid increases in the commercial exploitation of timber, the manufacture of sawn wood, and prices of forest products in the early and mid-1970s were key events that shaped the attitudes in Hojancha toward reforestation. Likewise, apiculture (beekeeping) became an activity of interest to several campesinos in the study region. It required the manufacture of wooden boxes to house the hives, and Hojanchans saw this as a potential growing market for wood. Finally, a small but growing number of woodshops making furniture in the study area in the 1970s, and the construction of houses in general, were regarded as potential markets for lumber, and good reasons to invest time, land and money to reforestation.

It was not until after the commencement of the CAF and FDF programs in 1988 and 1989 that the majority of Hojanchan farm operators participated in reforestation (Table 6-2). Of the 1,349 ha. reforested between 1977 and 1993 in the canton, 1,137 ha. or 84 percent, were reforested after 1987, under the incentive programs. Of these 1,137 ha., 689 ha. (61%) are under CAF, 165 (14%) are
under FDF, and 283 ha. (25%) are in parcels larger than 5 ha., financed by CAF Individual. Three-fourths of the interviewees of this study who have participated in the reforestation indicated the incentive program was a necessary condition for their commitment to the activity.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AREA PLANTED. HA.</th>
<th>No. of REFORESTERS</th>
<th>AREA IN CAF</th>
<th>AREA IN FDF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>1</td>
<td>2</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1978</td>
<td>4.5</td>
<td>7</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1979</td>
<td>8.7</td>
<td>14</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1980</td>
<td>2</td>
<td>6</td>
<td>--</td>
<td>--</td>
</tr>
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<td>1981</td>
<td>1.5</td>
<td>3</td>
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<td>5</td>
<td>1</td>
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<td>1984</td>
<td>25.9</td>
<td>17</td>
<td>--</td>
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<td>15</td>
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<td>--</td>
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<td>22</td>
<td>--</td>
<td>--</td>
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<td>1987</td>
<td>46.5</td>
<td>20</td>
<td>--</td>
<td>--</td>
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<tr>
<td>1988</td>
<td>272</td>
<td>86</td>
<td>272</td>
<td>--</td>
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<td>195</td>
<td>78</td>
<td>86</td>
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</tr>
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<td>1990</td>
<td>90.5</td>
<td>45</td>
<td>72</td>
<td>18.5</td>
</tr>
<tr>
<td>1991</td>
<td>120</td>
<td>47</td>
<td>93</td>
<td>27</td>
</tr>
<tr>
<td>1992</td>
<td>69.5</td>
<td>28</td>
<td>69</td>
<td>.5</td>
</tr>
<tr>
<td>1993</td>
<td>107</td>
<td>44</td>
<td>97</td>
<td>10</td>
</tr>
</tbody>
</table>

283 Reforestation Under CAF Individual, 1988-93 (Parcels Larger than 5ha.)

TOTAL 1,348.7 449 689 165

Sources: El Ganadero 1993: 25; CACH (Centro Agricola Cantonal de Hojancha) Unpublished data.

Three species, melina (Gmelina arborea), pochote (Bombacopsis quinatum), and teak (Tectona grandis)
constitute 90 percent of Hojancha's reforestation. Approximately 10 percent of the reforestation involves small parcels of a large number of local species, including Gallinazo (*Schizolobium parahybum*), gavilan (*Albizia guachapele*), "ron ron" (*Astronomium graveolens*), laurel (*Cordia alliodora*), and guanacaste (*Enterolobium cyclocarpum*). Each of the three main species has particular physical, ecological, and economic characteristics that influence which a reforester selects. The decision making process is not complex. As part of the incentive programs, CACH (in the case of CAF and FDF) and DGF (in the case of CAF Individual) make recommendations based on the suitability of one or more species to a given parcel of land. Only in those cases where more than one species is appropriate for a given parcel does the reforester realistically have the option to decide between two or more.

Melina (*Gmelina arborea*) is the most popular reforestation species in Hojancha, because of its rapid and generally straight growth. Melina typically can be harvested 12 to 15 years after planting (Murillo Rojas 1985: 30). The species is native to Southeast Asia, but grows well in regions of Central America with at least a short (3-5 month) dry season. Under ideal conditions, it can reach a height of 30 meters and a trunk diameter of 100 cm. (Murillo and Valerio 1991). Melina is tall in
appearance, with the largest branches in the upper half. Its leaves fall in November in Hojancha, the beginning of the dry season, and grow back in April, the beginning of the wet season.

Pochote (*Bombacopsis quinatum*) is native to Guanacaste. It occurs naturally as far south as northern South America and as far north as Honduras, where there are distinct wet and dry seasons. Pochote is fuller in appearance than melina. Under ideal conditions, its trunk can reach a diameter of 200 cm., and its overall height can reach 30-35 meters (Navarro and Martinez 1989). Many Hojanchan reforesters prefer pochote, because they are familiar with its appearance and its wood, which is frequently used in local construction and artisanry. Because of its smaller leaves, pochote is not as unsightly as melina and teak to many Hojanchans when its leaves are gone during the dry season. Pochote's greatest disadvantage is its slow rate of growth, 26-30 years to maturity (Murillo Rojas 1985: 30).

Teak (*Tectona grandis*), a species native to Southeast Asia and some parts of eastern India, can reach 30 m. in height in Central America (Chaves and Fonseca 1991:3). Like melina and pochote, it requires a distinct dry season of 3-5 months. Hojanchans complain that of the three species, teak is the most sensitive to slope and other environmental conditions. The worldwide demand for its
wood, however, makes teak the preferred species for some Hojanchan reforesters. Teak typically reaches 30 m. in height in Central America (Chaves and Fonseca 1991: 4) and its trunk exceeds 100 cm in diameter. In Hojancha, its leaves fall in November and reappear in April. Teak is usually harvested after 20-25 years of growth (Murillo Rojas 1985: 30).

The slope of a given parcel plays an extremely important role in species selection. Teak is particularly sensitive to sloped conditions, and experiences major problems, such as stunted growth and accelerated soil erosion on slopes greater than 20 percent. The erosion on slopes occurs because the large leaves curl during heavy rains, causing the water to gush onto the soil as if from a hose. The roots then become exposed, and growth stunted, if not ceased altogether. Teak does not grow well on compacted or shallow, poorly-drained soils. It also requires high amounts of light, so farmers must take care to thin out parcels before the crowns become too developed (Valverde 1993; Chaves and Fonseca 1991: 3, 35).

Melina, with medium-sized leaves, exhibits similar but less severe behavior on slopes. It is, therefore, not appropriate for slopes greater than 35 percent. In addition, melina is particularly vulnerable to competition with weeds. The producer, therefore, must weed frequently (Valverde 1993). Only pochote can be successfully grown on
slopes of up to 35-45 percent, but only if soils are deep, well-drained and not compacted or overly clayey in content (Navarro and Martinez 1989: 13).

In addition to slope requirements, each of the three species has particular elevation requirements that affect reforestation options. CACH officials and reforesters in Hojancha have found that teak grows best below 400 meters, which restricts it from Hojancha’s highest farms. Pochote can be grown up to 500 meters with a reasonably high rate of success, allowing producers in San Rafael and Huacas, the lowest areas of the canton’s highland coffee zone, to select it. Melina can be successfully grown, on relatively flat parcels, up to 600 meters, and under some circumstances up to 700 meters, enabling all but the study area’s highest farms, those in the highest zones surrounding Monte Romo, to produce it. The ability to grow melina at higher elevations than the other two species partly explains its popularity. Table 6-3 summarizes the slope and elevation conditions under which each of the species can be grown in Hojancha.

In those cases where the farm contains the proper soil, slope and altitudinal conditions to produce two or more species, the reforester makes the selection based on a number of economic criteria. Among the more common economic species selection criteria offered by Hojanchan reforesters in interviews are the market potential for the
wood, the length of time from planting until harvest, and the cost and availability of seedlings. Seedlings vary more than any of the other costs of reforestation.

TABLE 6-3
SLOPE AND ELEVATION RESTRICTIONS IN HOJANCHA, THREE MOST POPULAR REFORESTATION SPECIES

<table>
<thead>
<tr>
<th>ELEVATION</th>
<th>0-20%</th>
<th>20-35%</th>
<th>35-45%</th>
</tr>
</thead>
<tbody>
<tr>
<td>600-700 M. M*</td>
<td>M</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>500-600 M. M</td>
<td>M</td>
<td></td>
<td>M</td>
</tr>
<tr>
<td>400-500 M. M P</td>
<td>M P</td>
<td>M P</td>
<td>P</td>
</tr>
<tr>
<td>0-400 M. M P T</td>
<td>M P T</td>
<td>M P</td>
<td>P</td>
</tr>
</tbody>
</table>

M=Melina  P=Pochote  T=Teak

*=May exhibit difficulties above 600 M.

Melina offers the advantage of rapid growth, half the length of time of pochote. The wood is suitable for furniture, fence posts and construction (Murillo and Valerio 1991: 4; Carpio Malavassi 1992: 137-138). In Costa Rica, however, melina is more widely used in pulp and paper production. Ston Forestal, which has been a major purchaser of melina seedlings produced in Hojanchan nurseries, grows melina in the southern Pacific region. According to a company brochure, the operation currently occupies over 10,000 ha. of former banana cropland, which is rented from hundreds of landowners. Ston grows huge stands of melina trees for five years, and plants new seedlings immediately after the harvest. The harvested melina is then turned into wood chips for export, to be
used in the manufacture of paper and paper products in several countries, particularly the United States.

Melina harvested in Hojancha has not ended up as the raw material of paper. Only a small amount of melina has matured to harvest age in Hojancha, because the reforestation there is still a recently-begun activity. The CACH sawmill, established in the late 1970s, has manufactured small amounts of melina lumber since 1992. On average, one 18-wheel flatbed truckload of melina per month is transported from the CACH sawmill to an export-oriented furniture manufacturing plant in San José. These shipments represent about three-fourths of the study region’s melina lumber production. The remainder is used within the study area primarily in house construction and secondarily in the manufacture of apiculture boxes (Valverde 1993).

Because the melina harvest is so recent in the study area, Hojanchans’ experiences with its wood is limited. Several interviewees expressed their skepticism of the market potential of melina as a material for construction or furniture making. They are generally aware of its use in pulp and paper products, and they regard melina as a low grade timber with limited potential for generating the income a high grade hardwood with proven lumber qualities generates. Even some local furniture makers expressed these sentiments.
The rapid growth of melina and the low cost of its seedlings underlie its popularity in Hojancha. According to unpublished CACH data, melina constitutes more than two-thirds of the land reforested in Hojancha before 1988, and slightly less than half the land reforested since 1988 (Table 6-4). Of the 88 farm operators interviewed, 54 have reforested. Of these 54, 42 have reforested with melina. Among the latter, the most common reason given for selecting melina is its rapidity of growth, thereby freeing up the land more quickly for other future uses. This response was not surprising, given the high number of all reforesters interviewed who indicated that the incentive program was the primary reason for reforesting.

Those Hojanchans who choose to reforest with teak do so primarily for one reason: they are confident the positive market conditions (i.e., high demand and favorable prices for wood) will be maintained in the future. Reinforcing this belief is the presence near Puerto Carrillo, a village on the canton’s short Pacific coast, of a 3,000 ha. commercial teak farm, Bosque Puerto Carrillo. The German-owned company, which manufactures parquet flooring for export, buys teak seedlings each year from many of Hojancha’s nurseries. Several of the 17 interviewees who have reforested with teak expressed their belief that this company, or perhaps others manufacturing similar products from teak, will represent a market for
their teak timber in the future. Indeed, Carpio Malavassi (1992: 137-138) and Chaves and Fonseca (1991: 9-10) describe teak as an excellent wood for furniture, flooring, decorative panels, and other uses that require an attractive and dimensionally stable hardwood.

<table>
<thead>
<tr>
<th>TABLE 6-4</th>
<th>ESTIMATED TOTAL REFORESTATION IN HOJANCHA, 1988-93</th>
<th>BY SPECIES AND INCENTIVE PROGRAM</th>
<th>(In Hectares)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melina</td>
<td>Pochote</td>
<td>Teak</td>
<td>Other</td>
</tr>
<tr>
<td>CAF/FDF</td>
<td>444</td>
<td>173</td>
<td>117</td>
</tr>
<tr>
<td>CAF INDIVIDUAL</td>
<td>91</td>
<td>.54</td>
<td>99</td>
</tr>
<tr>
<td>TOTALS</td>
<td>535</td>
<td>227</td>
<td>216</td>
</tr>
</tbody>
</table>

Source: CACH Unpublished Data (Estimates)

Pochote is a popular wood in housing construction and in the making of doors in Hojancha. Because of its popularity, many of the canton's reforesters have chosen to utilize pochote. Several of the 16 interviewees who have planted pochote cited the popularity of the wood in carpentry in the region as their primary motive for selecting the slow-growing species. It is the desire on their part to "play it safe." According to Navarro and Martinez (1989: 10, 13), pochote is excellent for carpentry because it is both dimensionally stable and does not easily splinter when sawn on the construction site. To some of these reforesters, it was important to plant a familiar
native tree species that they have seen and grown up with all their lives. A common opinion among reforesters of pochote, or other native species, such as guanacaste, gavilan, gallinazo, and ronron, is that teak and melina, which drop their large leaves each November, are extremely unattractive during the long, hot dry season.

The establishment of a plantation of hardwood trees in Hojancha involves a fairly distinct seasonal chronology of activities. The planting of pochote seedlings is carried out in April, and teak and melina are planted in May and June, at the onset of the rainy season. This is so because the newly planted seedlings require several months of rain, and the soil is easier to work with then. Seedlings are most typically planted in a 3-by-3-meter spatial pattern (that is, planted 3 meters apart in rows that are 3 meters apart), and in a minority of cases, in a 2.5-by-2.5-meter pattern (Rodriguez 1986). A plantation of 3-by-3 results in 1,100 plants per ha.

Fertilization and weeding the first year are extremely important for all species reforested in Hojancha. The first fertilization ideally should be carried out in May to July, within one month after planting. The second fertilization is typically done in September of the first year. The first weeding is usually necessary by June, some two months into the rainy season. Subsequent first-year weedicings are necessary in August and November, the end of
the rains. Weedings, which involve the use of both machete and herbicides, are done twice a year for the first year in the case of melina, twice a year for the first three years in the case of teak, and twice a year for the first five years in the case of pochote. Subsequent weedings are needed at least every other year (Valverde 1993).

In melina plantations, in August or September of the first year, the straightest stalk is selected and all others are clipped, to produce the straightest trunks possible. This operation, called "la poda" or the pruning, is carried out the second year instead for teak, and the third year for pochote. Subsequent prunings of branches are usually carried out the fourth year in the case of melina, the fifth year in the case of teak, and the sixth year in the case of pochote. The branches that are cut are useful, either as firewood, fence posts, and even in non-critical carpentry.

In addition to prunings, four or five thinnings, spread out evenly throughout the life of the plantation, are necessary to prevent the crowding of trees as they grow. After all thinnings are complete, 120 trees remain for the final harvest. Thinnings produce a product with similar or greater uses than branches from the prunings. For example, Ortiz Monge (1992: 122) found in her research of teak plantations planted 3-by-3 meters, that the second thinning (the sixth year after planting) can produce about
155,000 Colones ($1,150) of marketable wood per ha. Three times that amount can be generated from the third thinning, in year 10. The fourth thinning, carried out in year 15, can produce over four times the income of the third thinning. A final thinning in year 20 can yield over 8 million Colones, or $60,000 per ha. Her analysis is based on the actual 1992 market price of $450 per cubic meter for teak exported to Holland. Her analysis is perhaps a bit optimistic, considering that thinnings involve the least desirable (i.e., most crooked) trees, which most likely would not command the highest market price.

In a similar study, Solano Villaverde (1990: 55) determined that a pochote plantation, planted 3-by-3 meters, can produce an income of 55,500 Colones ($606) per ha. from the second pruning (year 15), 207,500 Colones ($2,265) from the third pruning (year 21), 373,500 Colones ($4,078) from the third pruning (year 27), and 830,000 Colones ($9,061) from the final harvest, after year 30. CACH estimates that melina will produce an average of 90,000 Colones ($670) per hectare per year from the thinnings and prunings throughout its 13-year life.

In sum, reforestation is an activity in which many Hojanchans, including reforesters and community leaders, have a vested interest. The political ramifications of this interest are considerable, and are described in Chapter 8. The results thus far have been mixed, to the
delight of some Hojanchans and to the disappointment of others.

An indication of the prevalence of a "wait and see" mindset is the fact that reforested parcels tend to be small: typically 1 to 3 ha. As discussed in Chapter 7, many Hojanchan producers de-emphasize reforestation and emphasize activities that generate income every year. CACH and DGF forestry engineers and extension agents complain that too many reforesters have engaged in the activity solely for the incentive payments, and fail to maintain the plantations adequately. Indeed, one can casually observe reforested parcels around the study area with tall weeds competing with unhealthy-looking trees for soil nutrients. Other problems not uncommon in the study area include the planting of trees too close together, and the planting of trees on excessive slopes. These latter problems are the result of producers attempting to receive the incentive payments while at the same time freeing up for other purposes the land on which they had agreed to plant trees (Mendez Cruz 1993).

There exists some doubt over the sustainability, both environmentally and economically, of reforestation in Hojancha. Of the prior land uses of the interviewees' reforested parcels, pasture was by far the most common (79 %) followed by land in fallow (charral and tacotal). Much, if not most, Hojanchan pasture land has been highly
compacted from decades of overgrazing, a condition for which melina and teak are not well-suited, and which can hamper the growth of pochote. Thus, most interviewees who have chosen not to reforest, and even a small number of those who have chosen to, claim that erosion has not been halted from the reforestation, but in fact has been maintained, given that the reforestation involves deciduous species that leave the soil exposed part of the year.

Approximately 40 percent of the study area’s territory contains slopes greater than 30 percent, a condition which renders this type of reforestation only partly useful, at best, in the reduction of erosion (Calvo Alvarado 1984: 4, 26). In addition, Hamilton and King (1983: 78, 114-120), while acknowledging that deforested land is particularly susceptible to nutrient removal from runoff, argue that reforestation does not necessarily lead to increased water table levels, given increased evapotranspiration. Reforestation does, however, reduce sediment loads in streams and can reduce erosion, unless the tree harvest is carelessly done.

On the positive side, however, the reforestation has been at least partly successful in leading to the development and expansion of forward and backward linkages. Woodworking has increased in the canton, even before any significant harvests have been realized from the reforestation. The belief in the future of forestry,
however, has stimulated the activity, which is elaborated in the first-ever census of woodshops in the study area, completed as part of the fieldwork for this dissertation (Table 6-5).

The collection of melina seeds, which the trees drop by the thousands each year, has been an important, but declining dry-season activity for campesinos of Hojancha. All members of the farm family, including children, can participate. Shortly after the reforestation began in the study area, it became obvious that shortages of seeds existed for nurseries desiring to produce melina seedlings for the burgeoning reforestation. Until recently, seedling collection represented a reliable and easy source of additional farm income. Since 1992, however, the activity has fallen off due to fallen prices in the saturated melina seed market. Reforestation across Costa Rica has not expanded rapidly enough to absorb all the melina seedlings that are produced, nor the melina seeds collected.

Most producers with melina plantations in Hojancha no longer bother to gather seeds, whereas in the past, nearly everyone did. Interestingly, two Hojanchans managed to dominate the marketing of melina seeds in 1993, enabling them to buy seeds at low prices (250-350 Colones per cajuela, where 1 cajuela = 20 liters) from those who gathered, and to sell to reforesters at prices upwards of 1,300 Colones per cajuela. This was possible when
### TABLE 6-5
1993 CENSUS OF WOODSHOPS
LA CUENCA DEL RIO NOSARA, HOJANCHA, COSTA RICA

<table>
<thead>
<tr>
<th>Woodshop</th>
<th>Location</th>
<th>No. years</th>
<th>No. hired employees</th>
<th>Sales per year (Colones)</th>
<th>Products used</th>
<th>Sawmill Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omar Ramírez</td>
<td>Hojancha</td>
<td>7</td>
<td>3 p.t.</td>
<td>300,000</td>
<td>B, H</td>
<td></td>
</tr>
<tr>
<td>Taller de Fausto</td>
<td>Hojancha</td>
<td>12.5</td>
<td>1 f.t.</td>
<td>200,000</td>
<td>B, H</td>
<td></td>
</tr>
<tr>
<td>José Carmona</td>
<td>Hojancha</td>
<td>1</td>
<td>1 f.t.</td>
<td>150,000</td>
<td>A, H</td>
<td></td>
</tr>
<tr>
<td>Fulvio Sandoval</td>
<td>Hojancha</td>
<td>11</td>
<td>2 p.t.</td>
<td>2,500,000</td>
<td>B, C, H</td>
<td></td>
</tr>
<tr>
<td>Mueblería Los Angeles</td>
<td>Los Angel- 2 f.t.</td>
<td>2,750,000</td>
<td>B, H, M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>El Alto Huacas</td>
<td></td>
<td>1</td>
<td>0</td>
<td>120,000</td>
<td>A, M</td>
<td></td>
</tr>
<tr>
<td>Wm. Mendez Cruz</td>
<td>Monte Romo</td>
<td>2</td>
<td>1 p.t.</td>
<td>400,000</td>
<td>A, H</td>
<td></td>
</tr>
</tbody>
</table>

**KEY:**
- Products: A = furniture, special orders, > 50% within canton
  - B = furniture, special orders, > 50% outside canton
  - C = apiculture boxes
- Sawmill Used: H = Hojancha
  - M = Mansion
- f.t. = full time hired employee(s)
- p.t. = part time hired employee(s)
shortages of melina seeds occurred that year, due to the lack of interest in gathering. These two Hojanchans also hired laborers at 100-120 Colones per cajuela, to gather the seeds from their own two plantations, and sold the seeds at the higher prices. Under such circumstances, seeds can potentially be an important source of capital created by many, but enjoyed by few.

A final forward linkage that reforestation has developed, and one that has played a significant role in "putting Hojancha on the map," is the production of seedlings, the topic of the remainder of this chapter.

Tree Seedling Production in Hojancha:
Technical Considerations

The production of seedlings as cash crops in Hojancha, a spinoff activity of reforestation, has become an important capital-generating occupation. During the initial years of reforestation in the canton, the CACH nursery provided the canton its seedling needs at cost. Subsequently, however, producers began establishing their own nurseries, and producing surpluses of seedlings beyond the canton’s own requirements. Over 98 percent of the seedlings produced in the study area are sold to Costa Rican reforesters of all types outside the region, including smallholders, largeholders, and multinational businesses. The success of Hojancha’s nurseries, then, depends less on the state of reforestation within the study
area, and more on reforestation on a national scale, and
its associated political economy. By the latter 1980s,
seedling production had become a dynamic sector of the
Hojanchan economy, igniting dramatic transformations of
small farming and class structure in the canton (Table 6-
6).

TABLE 6-6
NURSERIES AND SEEDLING PRODUCTION
IN HOJANCHA, 1985-93

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NO. OF NURSERIES</th>
<th>NO. OF SEEDLINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>3</td>
<td>100,000</td>
</tr>
<tr>
<td>1986</td>
<td>12</td>
<td>700,000</td>
</tr>
<tr>
<td>1987</td>
<td>25</td>
<td>1,500,000</td>
</tr>
<tr>
<td>1988</td>
<td>31</td>
<td>1,800,000</td>
</tr>
<tr>
<td>1989</td>
<td>45</td>
<td>2,250,000</td>
</tr>
<tr>
<td>1990</td>
<td>49</td>
<td>3,300,000</td>
</tr>
<tr>
<td>1991</td>
<td>52</td>
<td>3,800,000</td>
</tr>
<tr>
<td>1992</td>
<td>54</td>
<td>5,807,000</td>
</tr>
<tr>
<td>1993</td>
<td>48</td>
<td>6,090,000</td>
</tr>
</tbody>
</table>


Nurseries typically occupy the flattest, most fertile,
and best-drained land parcels of a seedling producer's
farm. In many cases, the producer's own farmland is
inadequate, and land must be rented elsewhere. The
planting, maintenance and harvest of seedlings is a highly
labor-intensive activity. Plowing is necessary each year
to loosen and aerate the soil. Small parallel drainage-
canals are dug every 10 meters to reduce runoff and the
washing away of seeds and soil nutrients. The seeds,
planted approximately 15-by-15 cm. or 20-by-20 cm. apart,
are placed in holes 3-4 cm. deep. Under conditions of slope and or absence of drainage canals, these planting techniques would leave them vulnerable to washing away (Rodríguez 1986).

The timing of the planting of seeds is critical. Nursery operators obtain most of their seeds from CACH, though some obtain melina seeds from Hojanchans who gather them in their melina plantations. CACH obtains melina seeds locally, and pochote and teak seeds from seed banks operated by DGF and CATIE, the Technological Agronomic Center of Research and Engineering, at Turrialba. To facilitate germination, the soil containing newly planted seeds must be moist. For this reason, seeds are planted during the rainy season in Hojancha: pochote in May, teak in June and Melina in July. This scheduling also enables the 10-to-11-month-old seedlings to be harvested exactly when they are needed: at the time of the planting of reforestation parcels (Valverde 1993; Rodríguez 1986).

Since the planting of seeds in nurseries occurs during Hojancha's rainy season, weeds emerge between the time of plowing and the germination of the seeds. To prevent weeds from outcompeting the newly-germinated seeds for soil nutrients, herbicides are applied within a few days of planting. Once seedlings sprout above the soil, they and the weeds grow quickly, creating the need for frequent weedings with machetes, or with herbicides if inverted.
plastic cups are used to cover the plants. Fertilizers are generally applied one and two months after germination (Rodríguez 1986), and a third time at the beginning of the dry season (Valverde 1993). Twice or three times throughout the year, the seedlings need to be pruned. The straightest, healthiest shoot is selected, and the remainder are cut.

The successful harvest of seedlings requires a careful scheduling of activities, including (and especially) making arrangements to have sufficient labor available. The labor bottleneck that occurs around the seedling harvest is a major ingredient of the study area's social geography, and is elaborated in Chapter Seven. Each plant is pulled out of the ground in its entirety with the use of a long-handled spade, and laid in a pile with other plants. Pochote seedlings are usually planted in reforestation as entire plants. Melina and teak seedlings, however, are planted as "pseudoestacas," or stick-like plants with all but about 15 cm. of main stalk and 15 cm. of main root cut away. Once the melina and teak seedlings are harvested, they are almost immediately prepared as pseudoestacas, whereupon they must be planted within 15 days if packed in sawdust in wooden boxes or grain sacks, or within 8 days if not packed in that way (Valverde 1993). Pochote seedlings that remain as whole plants typically need to be planted within 10 days.
Seedling production quickly became an important smallholder activity in Hojancha, given its low physical infrastructure requirements and profitability at all scales of production (Gallardo 1991). Also contributing to the rapid success of the activity in the canton was the commitment to research and extension activities on the part of CACH, a condition which has not yet existed in other recent frontier smallholder strongholds of Costa Rica (Nichols 1993: 7). It was embraced by many Hojanchan campesinos with heightened needs for producing viable cash crops, a result of the region’s increased participation in national and international markets, and the associated higher prices for land and other goods.

Among the social changes tree seedling production has stimulated in Hojancha, perhaps none are as dramatic as those in household typology. As a highly labor-intensive activity from March to July, seedling production has transformed some of Hojancha’s small- and medium-sized farms into operations relying less on maximizing economic returns to family labor (G. Damais, et. al. 1986), and more on hiring labor and maximizing returns to capital, a strategy normally associated with large farms (Barlett 1982). A number of laborer families with tiny farms or no farms at all have been able to become petty capitalist producers of seedlings. They use their own tiny plot of land or rent one, and hire several laborers from March to
July, after which time they resume working as laborers on other farms. CACH has made available ample credit, albeit at high interest rates for small nurseries.

In the late 1980s and early 1990s, seedling production appeared to provide the campesinos of Hojancha an avenue for upward social mobility. By 1992, however, it became clear that this model was unravelling, and the culprit was seedling markets.

**Seedling Markets and Social Class in Hojancha**

The fact is, we cannot evaluate or even describe the workings of markets independent of the social structure in which they operate (Harrington 1990: 218).

Because of the requirement of planting seedlings within a few days after harvest, a well-orchestrated marketing system is necessary. This is accomplished through contracts between the buyers of seedlings (reforesters) and sellers of seedlings. The sellers can be the *viveristas* (nursery operators) themselves, or they can be *intermediarios* (middlemen). There are two types of intermediarios. One type are the several cantonal agricultural centers that buy seedlings from nurseries and resell them at a higher price, or simply act as an agent between nursery and reforester and charge a small commission per plant. A second type are the largest viveristas that buy seedlings from other nurseries to add to their own seedlings, in order to fulfill the contracts
they establish. In some cases these large viveristas simply act as agents between other nurseries and reforesters, and charge a commission per plant.

Large-scale viveristas dominate production and the marketing system (Table 6-7). Of the operators of Hojancha’s largest five nurseries, four are intermediaries. They successfully establish contracts with independent reforesters, national and multinational companies manufacturing paper or other wood products, and cantonal agricultural centers elsewhere in Costa Rica, primarily in Guanacaste and the Valle Central. By carrying out its role as an information agency, CACH officials facilitate the process of buyers and sellers finding each other.

These largest producers of seedlings possess advantages that enable them to establish contracts outside the canton and sell their own seedlings first. In all cases, these largest viveristas own capital generated from decades of cattle production. With this capital, they got in on the ground floor of the seedling business and have established their reputations as producers of quality seedlings. They have easy access to credit when it is needed, and can easily invest in the necessary inputs to maintain their high quality. As relatives or friends of the directors and employees of CACH, these largest producers have greater access to market information and technical assistance than do small-scale producers. The
### TABLE 6-7
HOJANCHAN SEEDLING PRODUCTION, BY NURSERY SIZE, 1989-94

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Large Nurseries</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. nurseries</td>
<td>7</td>
<td>5</td>
<td>7</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Seedlings produced (1000’s)</td>
<td>2,765</td>
<td>3,886</td>
<td>4,090</td>
<td>4,665</td>
<td>2,745</td>
</tr>
<tr>
<td>% of tot. prod.</td>
<td>66.3%</td>
<td>48.8%</td>
<td>55.1%</td>
<td>60.3%</td>
<td>72.9%</td>
</tr>
<tr>
<td><strong>Medium Nurseries</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. nurseries</td>
<td>8</td>
<td>21</td>
<td>27</td>
<td>19</td>
<td>7</td>
</tr>
<tr>
<td>Seedlings produced (1000’s)</td>
<td>844</td>
<td>1,166</td>
<td>1,335</td>
<td>913</td>
<td>680</td>
</tr>
<tr>
<td>% of tot. prod.</td>
<td>20.2%</td>
<td>43.0%</td>
<td>38.3%</td>
<td>30.3%</td>
<td>18.0%</td>
</tr>
<tr>
<td><strong>Small Nurseries</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. nurseries</td>
<td>30</td>
<td>24</td>
<td>20</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td>Seedlings produced (1000’s)</td>
<td>563</td>
<td>689</td>
<td>382</td>
<td>515</td>
<td>343</td>
</tr>
<tr>
<td>% of tot. prod.</td>
<td>13.5%</td>
<td>8.2%</td>
<td>6.6%</td>
<td>9.4%</td>
<td>9.1%</td>
</tr>
<tr>
<td><strong>TOTAL SEEDLINGS</strong></td>
<td>(1000’s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4,172</td>
<td>5,741</td>
<td>5,807</td>
<td>6,093</td>
<td>3,768</td>
</tr>
</tbody>
</table>

Large = 200,000 + seedlings
Medium = 50,000-199,999 seedlings
Small = 1-49,999 seedlings

Source: Censos de Viveros, Dirección General Forestal, Ministerio de Recursos Naturales y Minas
various buyers of seedlings turn to these larger nurseries first, because of prior experience, word-of-mouth, or their advertisements that appear on Hojancha's page in the Costa Rican telephone directory.

Smaller-scale viveristas generally must rely on the larger nurseries to market their seedlings for them. The larger viveristas make 2 to 8 Colones per seedling, or a 10 to 67 percent markup. Unfortunately, markets have become saturated and prices have fallen for two species, melina and pochote (Table 6-8). The melina crisis was heightened by Ston Forestal's decision in 1992 to produce its own melina seedlings, a decision which left many dependent Hojanchan producers stranded. Many smaller nurseries have folded and their melina and pochote seedlings remain in the ground, because larger producers had first crack at the limited markets. In other cases, small viveristas using

<table>
<thead>
<tr>
<th>YEAR</th>
<th>MELINA</th>
<th>POCHOTE</th>
<th>TEAK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1988</td>
<td>8</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>1989</td>
<td>7-9</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>1990</td>
<td>7-10</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>1991</td>
<td>6-10</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>1992</td>
<td>4-8</td>
<td>17-21</td>
<td>15-17</td>
</tr>
<tr>
<td>1993</td>
<td>8</td>
<td>12-21</td>
<td>15-17</td>
</tr>
</tbody>
</table>

PRICES ARE IN COLONES PER SEEDLING
Source: CACH, Unpublished Data 1993; Gallardo 1991
markets. the previous years' prices to guide their planting decisions have chosen the "wrong" species two or more years in a row. High prices for a given species mean over-production and a fall in prices the following year.

In large measure, the problem is one of timing, and a lack of coordination between supply and demand. Seeds are planted in June and July for harvest as seedlings the following March and April. Reforestors usually do not apply for incentive payments until after the seeds have been planted, so their species preferences are not known in time. In those cases where information is available ahead of time, the larger nurseries with contracts have greater access to it.

Large-scale viveristas are insulated from these market effects and have a high rate of persistence as they continually reproduce capital. Smaller-scale producers have a high overall failure rate (Table 6-9). Adding insult to injury, if they lose money from their unfavorable market experiences, they are unable to pay off their loans, and, therefore, are indebted and unable to obtain another loan for the next planting.

Conclusions

The cattle period of the 1960s through 1980s saw the beginnings of a differentiated Hojanchan population, with an emerging class of capital-accumulators within the community. This process of class formation has accelerated
markedly since the late 1980s because of seedling production. Initially it was hoped that the landless or land-poor laborers could experience upward social mobility by renting a small parcel of land and producing the seemingly profitable seedlings. Of 28 present and former viveristas interviewed, 3 were wage laborers as recently as 1990 that now enjoy continued economic success and upward social mobility each year. Sadly, however, most small-scale viveristas have experienced worsened conditions, because of debt obligations tacked on to their marketing failures.

<table>
<thead>
<tr>
<th>Year</th>
<th>% of Large Nurseries Failing</th>
<th>% of Medium Nurseries Failing</th>
<th>% of Small Nurseries Failing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989-90</td>
<td>8%</td>
<td>54.5%</td>
<td>50%</td>
</tr>
<tr>
<td>1990-91</td>
<td>6.6%</td>
<td>27.3%</td>
<td>66.7%</td>
</tr>
<tr>
<td>1991-92</td>
<td>0%</td>
<td>34.5%</td>
<td>90%</td>
</tr>
<tr>
<td>1992-93</td>
<td>10%</td>
<td>38.9%</td>
<td>61.1%</td>
</tr>
</tbody>
</table>

Source: Censos de Viveros, Dirección General Forestal, Ministerio de Recursos Naturales y Minas.

A remedy to the unfavorable marketing situation of small viveristas is not outside the realm of possibility, given Costa Rica's solid social democratic ideology (discussed in Chapter Eight), and the widespread popularity
of producer cooperatives in many sectors of the Costa Rican economy. The formation of a cooperative of small- and medium-scale viveristas would most likely improve their access to markets, just as a cooperative of that type did for small-scale coffee producers in Hojancha. Secondly, the state could require reforesters receiving incentives to apply for the funds (and indicate the species they intend to use) before the seed planting season, one year in advance of their reforestation. This type of "directed" planning could provide a means for coordinating supply and demand.

The social consequences of the workings of the relatively short-term seedling markets are separate from the social impacts of reforestation, a long-term commitment by rural producers. The overall health of the seedling sector is dependent upon the status of reforestation in Costa Rica in the future, but not vice-versa. While reforestation is driven less by market considerations than by subsidies, seedlings are almost entirely market-driven. By heavily promoting reforestation, the state indirectly stimulates seedling production. All too often, the unintended result is saturation of seedling markets, and increased disparities within the community. The pitting of Hojanchan against Hojanchan, created by seedling markets, is a relatively new feature of the locality's regional structuration.
It is doubtful the IDB, or other multinational financial institutions, will indefinitely continue providing low-interest loans to the Costa Rican state earmarked for small-farm reforestation incentives. Whether or not the Costa Rican state maintains its commitment to subsidizing small-farm forestry will depend largely on the overall character of forest products industries, such as lumber, paper products, pulp, and manufactured goods. This, in turn, will depend upon Costa Rica's position in contemporary global economic restructuring, and more specifically, its prospects for developing forward linkages to its forest products, and its success in finding new export markets for these new industries.
CHAPTER SEVEN

THE CONTEMPORARY HOJANCHAN AGRICULTURAL LANDSCAPE AND GEOGRAPHY OF LABOR

The Hojancha study region, in the minds of its inhabitants and many other Costa Ricans familiar with it, functions in multiple ways as a region with a common purpose as it strives for upward social mobility. At the same time, the study region is internally diverse, in terms not only of physical environment, but in land use and social stature as well. While forestry is a major component of the study area's contemporary regional restructuring, it is by no means embraced by everyone. Forestry is, therefore, articulated with a variety of other agricultural land uses and associated labor activities. Furthermore, forestry is accepted or rejected within a heterogeneous social context, as the immediate material needs of each Hojanchan family may differ. But, while each family pursues its own goals, the sense of community is largely maintained, as if in a common effort.

The purpose of this chapter is to describe salient features of Hojancha's contemporary human geography, especially variations in its agricultural landscape and employment, both of which are underlying ingredients as well as the outcomes of contemporary regional change. Such change has involved uneven development, as evidenced in housing. Though each of the region's transformations in the twentieth century has been significant, each has
included the maintenance of traditional agricultural activities, albeit in modified form. For example, the production of basic grains and coffee have been maintained in the study region since the 1930s, but with different economic emphases. Coffee has become much more than a subsistence crop, and basic grains have lost their importance as market-oriented crops. The latest transformation, involving the widespread, but not universal, adoption of forestry, has brought about yet another shift in the community's labor profile. Even those families who have little or no direct involvement in forestry are affected by it as they face extra-household employment decisions.

Variations in Land Use and the Built Environment Within the Study Region

Agricultural livelihood modes in the study region vary by farm size as well as by subregion. For example, within each of the localities of the study region, families with no land or only a tiny parcel make very different production decisions, and face more limited choices, than farm families with a few hectares of land. Likewise, these household types utilize different economic rationale than neighboring households with abundant land. Because of elevation and topography, most farmer- and laborer-household units of the study area's highest localities, Monte Romo, Huacas, Pita Riyada and Maravilla, engage in
different activities throughout the year than those of Matambú or the Hojancha Plain (Fig. 7-1). In cases of farm fragmentation, it is not uncommon for farm operators to own or rent several hectares of land in a different altitudinal zone from the home farm, enabling them to diversify activities.

I. The Plains of Hojancha and San Rafael

Cattle grazing is the dominant land use among farms of all size categories in the altiplanos in which the town of Hojancha and the village of San Rafael are located, both uplifted plains below the appropriate elevation for coffee production. Secondarily, scattered throughout these altiplanos are many small, newly-established tree plantations, especially on sloped or degraded lands, and small tree seedling nurseries on the flattest lands. These nurseries are found on farms of all sizes, and especially small farms whose operators consider the activity an avenue for upward mobility. Cattle and seedlings are the primary economic activities in these plains. Nearly all small farms in these altiplanos, and many of the medium- and large-sized farms, also produce basic grains, to meet the household’s subsistence needs.

A study conducted in the mid-1980s (MAG 1986: 94-95) revealed a trend in land tenure in the Hojancha Plain and surrounding hills, particularly visible between the mid-1970s and mid-1980s: the number of farms decreased some 16
FIGURE 7-1

GENERALIZED AGRICULTURAL LAND USE, CANTON OF HOJANCHA
percent while the average farm size increased about 20 percent. It is clear from the fieldwork for this dissertation in 1992-93 that the trend uncovered in the MAG study is actually the result of a combination of events. The obvious one, that smallholders have gone out of business and sold out to largeholders, is only one issue.

Countering this concentration of land is the division of land by inheritance, which would tend to create the opposite effect: smaller and more numerous farms. This latter event creates in these low altiplanos farm units too small to be profitable. Because coffee is produced generally above 500 meters, the only profitable cash crop in the Hojancha and San Rafael Plains are tree seedlings, and these are produced only on extremely flat land parcels, which collectively comprise only a small percentage of total farmland. Siblings who inherit part of a farm, therefore, tend to sell their portion to neighboring farm operators or to one or more siblings who wish to keep the original farm intact. Often, the siblings together continue to operate the family farm intact, without dividing it at all. By pooling resources, they can sometimes acquire new parcels and enlarge the original family farm, a strategy increasingly viewed as necessary, given the declining terms of trade the region’s cattle producers face.
Besides the zone's relatively flat land compared to other parts of the study region, three additional characteristics of the Hojancha Plain make it particularly suitable for seedling production. First, the altiplano soils are by-and-large the product of the Rio Nosara and its tributary streams, and are among the most fertile of the study region. This permits high yields to be realized. Second, as the site of the town of Hojancha, road access, a crucial component of successful seedling production and marketing, is the best in the study region. Third, the concentration of population in the town of Hojancha and its vicinity, translates to a relative abundance of labor, alleviating in part the bottlenecks that occur during planting and harvest. While labor is generally mobile throughout the study region, farm operators indicate that abundant labor close at hand is advantageous.

In part, these characteristics also provide advantages to cattle producers of the Hojancha Plain. The relatively flat pastures are easier to maintain and permit higher stocking rates than the more sloped pastures elsewhere in the region. Labor for pasture maintenance is easy to come by. Cattle can be transported by truck much more easily on the paved and improved earth roads of the Hojancha Plain. These conditions, however, are not prerequisites to successful cattle production. Farms of the often sloped San Rafael Plain continue to emphasize cattle production,
and are generally able to encounter sufficient labor. The improved earth road linking the town of Hojancha with Puerto Carrillo facilitates the transportation of cattle to and from San Rafael, even during the wet season.

Not all households of the Hojancha Plain are easily accessible. Near Libertad, San Gerardo and Cuesta Blanca, three loosely defineable "villages" near the town of Hojancha, one encounters isolated households along dirt roads of the poorest quality, with deep ravines formed by hard rains and erosion. Many of these are poor laborer households that maintain surprisingly little contact with Hojanchan promoters of forestry and subsidized housing. These are the peripheral areas of the Hojancha Plain.

The town of Hojancha in many ways takes on the character of a small urban area. Several streets arranged in a grid pattern about the plaza are lined with houses close together. The "plaza" is a shaded park that serves as the town's social focal point. A rather large church and a recently-constructed cement amphitheatre lie adjacent to the plaza. A block away from the park is the large community hall where dances and meetings are held. The town has two schools.

The majority of the town's houses have cement outer walls and are neatly painted, giving the appearance of a "middle class" rural community more typical of the Valle Central than of outlying frontier regions. Most of the
remaining houses are of the more typical rural type: approximately one meter of the wall is cement at the bottom, while the remaining portions of the walls are neatly-painted wood. Very few traditional all-wooden houses remain in the town of Hojancha. Several isolated houses outside of town, occupied by poor laborer families in peripheral areas of the Plain of Hojancha, are of the traditional wooden type.

Most houses of the town, as well as of the other villages of the Hojancha Plain, have small, unorganized gardens, primarily in the back yard, consisting mostly of fruit trees. Only a minority of the town's households have planted vegetable crops, root crops, or grain crops in the gardens, like those described by Wagner (1958). Among the important fruits are plantains and bananas (Musa sp.), lemons (Citrus limetta), oranges (C. aurantium and C. sinensis), avocados (Persea americana), mangoes (Mangifera indica), and zapote (Calocarpum mammosum). The interviews revealed that the importance to the household of these gardens is minimal, compared to Wagner's findings. This is a reflection of the greater incorporation of the region's farms in the national and global economies, and the associated need for the locals to devote a greater portion of their time to producing commodities for market, and less to kitchen gardens.
II. The Highland Coffee Zone

Hojanchans descended from the earliest settlers of the region's rugged highlands who maintain the farms today, enjoy greater opportunities to diversify production than many families occupying lowland Hojanchan farms. Ironically, these highlands were by-and-large viewed as peripheral areas, and among the least desirable for settlement, before the opening of local coffee markets in the late 1950s and early 1960s. The establishment of the coffee cooperative in 1962 provided a boost to the commercial viability of even the smallest of highland coffee farms. One official of the cooperative estimates that today, 80 percent of the approximately 300 farms of the canton's highland coffee zone produce that crop. Of the 41 operators of highland farms interviewed for this study, 31 (76%) produce coffee. Those highlanders who choose not to produce coffee tend to fall within two categories: medium- and large-sized cattle farms that strive to maximize returns to family labor; and minifundias (the smallest of smallholdings) whose operators lack sufficient access to capital, or who choose to devote the scarce land to producing basic grains for the household.

Another common activity among highland smallholders, and especially in Monte Romo, is small-scale commercial production of tomatoes and chilis (Capsicum spp.). These households own or rent small parcels along stream
tributaries of the Zapotal River, which provide irrigation for dry season production. In most cases, less than one hectare is devoted to the highly labor-intensive activity. Even a fraction of one hectare of such vegetable production can generate a significant supplemental source of income for a small farm household. One-fifth of the highlanders interviewed produce tomatoes and chilis for market. Nearly all of these are small farms. For most, the vegetables represent the second most important income-generating activity, after coffee. For some, vegetables rank third in economic importance, after coffee and cattle. Nearly all tomatoes and vegetables produced in the study region are sold in the pulperias (general stores) of Hojancha, or at the market in the city of Nicoya.

The highland coffee zone is not completely dominated by smallholdings, but in fact contains several medium-sized and larger farms that emphasize cattle production, in a few cases exclusively, in most cases in conjunction with basic grains, coffee, vegetables, or reforestation. Thirty of 41 interviewees with land in the highland coffee zone graze cattle. The rugged highlands are not beyond the ability of cattle to graze, nor are they beyond the reach of cattle trucks, as most of the zone is linked by all-weather road to Hojancha. Pasture improvement and other intensification efforts are minimally used, except for supplemental feeding of sugar cane to the herds during the drier months.
Because the flatter, more fertile, and more accessible land parcels are devoted to coffee, vegetables and basic grains, and the more peripheral, more highly sloped and degraded lands are devoted to grazing cattle, the latter activity appears to be as much a strategy to maximize the use of the least desirable lands as it is to maximize returns to family labor or capital.

Small plantations of melina and, in the lowest portions of the highland zone, pochote, are beginning to appear on unused pasture land. The high degree of erosion on the zone's slopes has served to convince many of these farm operators to devote small portions of grazing land to reforestation and to take advantage of incentive payments. The reforestation overall is more recent in the highlands than in the vicinity of Hojancha. Thus, a pattern of diffusion from lowlands to highlands has occurred within the study region. Interestingly, several of the interviewees with farmland in the highlands remain skeptical that reforestation with melina can reverse highland erosion and improve the region's water resources, and prefer instead to allow natural forest to overtake the more sloped, degraded lands.

Compared to the town of Hojancha, houses in the communities of Monte Romo, Huacas, Pita Rayada and Maravilla are spaced farther apart. The town grid pattern of Hojancha is non-existent in these less populated
villages. Instead, houses are strung along the main roads, and in a few cases along paths, less than 250 meters from the main road. Each village does have its own school, church, and community hall located adjacent to a "plaza," or soccer field. Some of the houses are constructed of cement, but they represent a smaller proportion than in Hojancha. Most are of the cement-wood type. A fair number of neat, well-maintained all wood houses remain. The traditional "rancho" house type, with roof of palm leaf, has virtually disappeared from the highlands. As in the town of Hojancha, most houses of the highland communities have in their yards unorganized gardens and a few fruit trees of the same type found in the study region's lowlands.

III. Matambú

The community of Matambú, situated on a low, dissected plain, 300-350 meters in elevation, is the study region's most distinct locality. The indigenous community is in a state of change, as new cement houses have begun to appear on the landscape. Approximately half the houses of Matambú now have electricity, an amenity enjoyed by the remainder of the study region's towns and villages for some two decades now. A small but growing number of the community's families own "enduro"-type (dirt, or trail) motorcycles, the most popular form of transportation in the Nicoya Peninsula today. An improved earth road in fair condition
permits truck and motorcycle access most of the year. Some 25 families now have water piped into their homes. A school, church, and community hall flank Matambú's plaza-soccer field.

In contrast to these signs of modernity are the presence of a fair number of traditional rancho houses and well-tended gardens. The indigenous people of Matambú rely much more heavily than other Hojanchans on the kitchen garden. This reflects the desire to maintain a connection with traditional folkways. In large part, however, this practice is maintained out of necessity. Given that most farm units in Matambú are extremely small and off-farm employment opportunities are frequently scarce, gardens provide the household an important food source.

With a 1990 population of 875, Matambú represents, after the town of Hojancha, the study region's second largest concentration of people. The community, comprised mostly of descendants of the Chorotega, was declared an Indigenous Reserve in 1980 (IDA 1990). This event enabled the indigenous people of the locality to recover most of the land that Cartagos had bought or acquired through foreclosure over a period of several decades. The transfer of land was carried out through the Agrarian Reform Institute (IDA) in 1980. Today, the IDA settlement consists of 514 ha., most of which is divided into small family farm units of 2-10 hectares. As one indigenous farm
operator expressed it, most of these family farm units occupy parcels with soils so exhausted they hardly produce anything at all. In almost all cases, one or more family members must work off farm, locally during the wet season, and in the Atlantic banana zone during the dry season. Market-oriented production is limited; most of these small farms produce basic grains, fruits, vegetables, and a few head of dual purpose (meat and milk) cattle for household consumption.

Slowly, reforestation is finding its way into Matambú. Because of the low altitude, producers can choose between the three main species and several other (native) species, such as gavilan. Nursery production of seedlings exists in the community, but is primarily carried out by outsiders, such as Cartagos of Hojancha, who rent the flat, relatively fertile land from the landowner. This provides the landowner a reliable income supplement.

A dominant social and political feature of the Indigenous Reserve is a cooperative farm, established in 1985 by 16 families. The collective was formed with the help of IDA and CONAI, the National Commission of Indigenous Affairs. The 16 heads of household got together and lobbied these organizations for the funds to buy the land. Today, the 46 ha. cooperative operates under the name ASPINMA (Asociación de Pequeños Productores Indígena de Matambú), the Association of Indigenous Small Producers
of Matambu. It has 11 remaining member-families who democratically delegate the work load and decide investment policies. The members elect a president, and meet at least monthly to establish committees to oversee each of the collective's activities and to discuss the successes or shortcomings of each project.

Most of the basic grains and cattle that are produced by ASPINMA are used in household consumption, but a small surplus of these, and nearly all the tomatoes and chilis produced with the help of irrigation, are sold at market. Small surpluses of maize, beans and rice produced on 7 ha. of basic grains land, are generally sold at the pulpería of Matambú. A small number of the cattle produced each year on the 35 ha. of pasture are sold to intermediarios. The vegetables, produced on a mere half hectare, are sold at the market in Nicoya. The less-than-favorable road access to the community somewhat limits this marketing. Each of the 11 families must earn income by one or more members working off farm. Therefore, the cooperative is not a completely self-sufficient unit. In the minds of its members, however, it provides a more reliable source of income and subsistence than would be the case if the 46 ha. were divided up into 11 family farms. At this point in time, the members are not planning to reforest any part of the farm. They believe that land is scarce, and the
immediate needs of their families require that land uses be carried out that produce food or income at least annually.

**Cattle and Basic Grains:**

**Contemporary Hoianchan Production Choices**

Despite the dramatic changes brought about by reforestation, not only in the lower altiplanos but throughout the study region, cattle production remains the dominant activity, economically and spatially. Slowly, however, other land uses are replacing grazing. Through the early 1990s, cattle production diminished slightly from the 1970s to the 1980s, driven by lower prices on the international market and softer demand for beef in the United States. In the 1980s, pasture in the study area was less than in the 1970s. According to the 1973 and 1984 agricultural censuses, pasture accounted for 79% and 74%, respectively, of the canton’s farmland. Meanwhile, in terms of percentage of land area, land in fallow ("tacotal") and in annual crops, especially coffee, increased slightly.

In the 1990s, the gradual decrease in pasture land appears to be continuing, in part because of reforestation, the vast majority of which is replacing pasture directly. Of the 3,603 ha. of combined farmland of the 88 farm operators interviewed in 1992-93, 2,205 ha. (61%), was in pasture. According to unpublished CACH forestry data and estimates of total farmland hectarage in the study region,
between 1984 and 1993, forestry increased from 0.5 percent of farmland to approximately 9.6 percent.

While new activities are capturing the attention of local producers, cattle raising remains a key strategy. It is regarded as the safest of activities, largely immune from years of unfavorable weather. Herd sizes can be adjusted according to ecological and market conditions. For example, during the dry season, when grass is scarce, herds are deliberately reduced. They are built up again the following rainy season. Surprisingly, many interviewees indicated that prices are generally favorable in November and December, the preferred months to sell off a few head of cattle, and there is seldom any glut in the market at that time. Prices and markets tend to dry up by January, however. Since many farm operators or members of their families work off farm, often outside the region, during the idle dry months, wages earned between December and March are one source of capital used to enlarge herds in April and May. The nursery harvests provide early wet-season wages, some of which are used to finance herd enlargement.

Most smallholders engaged in cattle culture practice "ganadería de cría," or small-scale breeding for calf production. This involves the yearly improvement of the herd, by retaining female calves, and selling off male calves at 7-9 months of age and older, fattened, or
unproductive brood cows. Steers are usually not retained beyond nine months on small farms, because stocking rates necessarily are decreased for older (heavier) animals that consume more forage, and per-hectare output decreases. A trend that Damais, et.al. (1986) identified in the 1980s in the Nicoya Peninsula, the combining of ganadería de cría and "ganadería de doble propósito" (dual purpose cattle raising) has become almost universal among Hojanchan smallholder cattle producers. By improving cow-calf herds, by breeding holstein or pardo suizo with brahman, they can produce milk for the household and possibly for sale to neighbors. According to Damais, et.al. (1986: 18), the herd improvement, the intensification of coffee production, and the overall trend of de-emphasizing cattle, are three small-farm characteristics in-line with small-farm strategies of maximizing returns to land.

Medium- and large-sized farms, which embody strategies to maximize returns to, respectively, family labor and capital, generally exhibit a greater variety of cattle-raising activities. Many operations of this size do not limit themselves to ganadería de cría. Market conditions vary in the livestock industry, and these farms are better able to adjust to, or take advantage of, these changes. For example, "ganadería de desarrollo," the retaining and/or purchase of 7-9-month-old steers for an additional 9-12 months of fattening, can at times be quite lucrative,
and an attractive supplemental activity to ganadería de cría.

Most medium-sized farms, and even a minority of large farms, produce basic grains for household consumption, as insurance against years in which cattle markets are crisis-ridden. Typically, however, such crises are not severe, and medium-sized producers remain as confident as largeholders in the viability of livestock production. For example, three medium-sized highland farm operators indicated they recently abandoned coffee altogether, pulled out their coffee trees, and expanded their pasturage by those few hectares. In their view, crises in coffee markets and coffee production complications overshadowed whatever difficulties there may be in cattle markets.

A favorable economic yield can be realized by buying or retaining yearlings for fattening and later sale. Generally, however, this affects only medium- or large-sized farms that have sufficient grazing land, and that operate under a strategy of maximizing returns to scarce family labor. Typically, in 1993, a producer could sell a calf of 7-8 months old, weighing 150 kg., for 20,000-23,000 Colones ($143-164). A calf of one year of age, weighing approximately 230 kg., could be sold for 35,000-40,000 Colones ($250-286). A two-year-old animal, weighing 350-370 kg., had a market price of 45,000-49,000 Colones ($321-350). The fastest gain in weight and economic yield occurs
the first year. During that first year, labor requirements are moderately higher. Since small farms possess an abundance of family labor and scarcity of land, it makes sense to concentrate on the production of yearlings. Larger farms possess more land, and attempt to minimize the hiring of labor. Ganadería de desarrollo is better suited to the larger farms.

The majority of Hojanchan cattle producers sell cattle, whether aged 7-9 mos., one year, two years, or older, to intermediarios, who sell to regional markets, such as "la subasta," or auction house. Those who buy cattle for fattening generally buy from these same intermediaries. The intermediarios typically charge a markup of 7-10%. There are about 10 such intermediarios in the study region operating on a full-time basis (Vargas Quesada 1993). About half of them own their own panel trucks to carry the cattle, and half must hire trucks. Because of stiff competition, some of these intermediarios have begun acting as middlemen in tree seedling markets on a part-time basis, and sometimes even renting small land parcels and producing seedlings as well as marketing them. Only the largest of Hojancha’s cattle producers bypass intermediarios, and trade directly with la subasta.

Basic Grains

Maize, beans and rice are not important as market crops to the Hojanchan economy, but this does not diminish
their importance to the Hojanchan household. When queried about which activities contributed most to household income, several interviewees included basic grains with their response, even if they produced only for household consumption and not for market. To these producers, whenever a portion of a family's dietary needs is met by on-farm basic grains production, less food needs to be purchased at the local pulperia. They treat this cost savings as income.

Typically, maize and beans are produced in rotation with one another. There are several different maize-bean production variations utilized in the study region, but two systems are dominant. One system involves the production of one crop each of maize and beans each year, starting with the planting of maize in May, the harvest of maize in August, the planting of beans in September on the same land, and the harvest of beans in December. The maize can be produced in one of two ways: higher use of technology, including plow and chemical inputs, or lower use of technology, with no plowing and very few chemical inputs, if any. The "espeque" or digging stick is used in both versions. The lower-technology version requires 55-70 jornales, or person-days of labor, and produces 700-1,100 kg. per hectare. The higher technology version requires 65-85 jornales and produces 1,400-1,800 kg., per hectare (Ribier, et.al. 1988: 16-27). Households with limited
resources opt for the lower technology version, while those who can afford plows, the higher labor requirements, and inputs choose the higher-yielding version.

The beans can be produced in one of two ways: "fríjol sembrado," which uses the digging stick and some chemical inputs, or "fríjol tapado," or the "covered bean" system, a lower-technology version that involves fewer inputs. Fríjol sembrado requires 65-85 jornales, and produces 450-550 kg., per hectare. While its yields are lower, 275-450 kg. per ha., the labor requirements of frijol tapado are also lower, 35-50 jornales per ha. (Ribier, et.al. 1988: 42-47). Fríjol tapado is better suited to slopes than frijol sembrado. Households with limited resources opt for fríjol tapado.

Fríjol tapado is a traditional, low-technology system introduced into the region by Cartagos early this century (Ribier, et.al. 1988: 40). It involves the planting of beans into an unplowed land parcel. All that is required is a field full of weeds. Parallel paths approximately one meter wide and 3-5 meters apart are chopped by machete to provide access into the field. The planter walks the length of each path, tossing seeds directly into the weeds. Once the seeds are tossed, the rest of the weeds are chopped by machete, covering the seeds. The dying weeds act as both fertilizer and as a "pseudo-soil" that protects the seeds from washing away.
The other common maize-bean production system encountered in the study region involves the production of two crops each of maize and beans each year. Typically, the land is rotated between the two: land planted in maize in May is planted in beans in September, and land planted in beans in May is planted in maize in September. Households that devote time, effort and resources to producing two crops of each annually, generally favor the higher-technology versions of maize and beans production. The one exception to this is that, quite often, the second bean crop is frijol tapado.

The farm household must decide how best to utilize its family labor and its economic resources in deciding which system to adopt. Based on interviews of farm operators, no clear generalizations emerge with respect to farm size or even location within the study region, with one exception. Laborer households with no land of their own, but with access to a small borrowed or rented parcel, almost always produce only one crop of maize and one of beans each year. According to Ribier, et.al. (1988: 63-64), these families choose this system so that they can devote as much effort as possible to frijol tapado during and after the rainy coffee harvest season. Beans are the most valuable basic grain crop to such families, and they want to maximize yields to the extent possible, given their limited resources.
Rice is a highly labor-intensive crop that generates low yields per unit of labor input: one hectare of rice production in the region requires 85-100 jornales, and yields 700-1400 kg. (Ribier, et.al. 1988: 54-56). Rice is usually not grown in rotation with either maize or beans; it requires flatter land than the other two crops. Planting occurs in May, and the harvest in October or November. Because of the land requirement and the relatively low yield per unit of labor, fewer farm families produce rice than either maize or beans.

The Geography of Labor in Hojancha

Some Hojanchan households earn most if not all of their livelihood from wage labor, working on farms or in nurseries owned by others. These are either minifundistas who have access to only a tiny land parcel, or are landless altogether. Many other households have one or more members who work off-farm, but rely on these wages for less than half of the family livelihood. Their off-farm work is part of a household strategy matrix that involves both wages and various on-farm crop and/or livestock options. For both groups, wage-earning opportunities are not uniformly even throughout the year, often causing complications in planning household activities and finances. Labor bottlenecks occur several times throughout the Hojanchan year, forcing many smallholders to choose between on-farm and off-farm work, and forcing landless peones to choose
between earning wages and devoting time to growing basic grains for their families on someone else's land.

From early December until mid-March, employment opportunities in Hojancha are limited. Among those available are the few farms producing dry-season tomatoes and chilies, cattle farms in need of fence repairs, and a few farms that put off land clearing or maintenance jobs until after the busy wet season is over. The severity of the Hojanchan dry season largely precludes the need for weeding or chopping pasture grasses. More timber-cutting occurs during the dry season, because of the ease of carrying out the work then compared to the wet season. Most families that produce their own wood for fuel, construction, or fence posts cut it during that season, and the hiring of labor is sometimes needed. The harvest of reforestation plantations, and the cutting of timber for woodshops have not yet created abundant employment, as neither activity has developed to its expected level.

Of the 88 farm households whose operators were interviewed, 50 have at least one member that works off-farm each year. These correspond in almost all cases to small farms. The exceptions are two medium-sized farms, each of which is operated jointly by two or more grown siblings (and, therefore, are too small to support multiple families), and one large farm whose household head owns and operates a woodshop. Of the farm household members working
off-farm, one-fourth migrate from the region during the dry season. In comparison, of 31 members of laborer (non-farm-owning) families interviewed, 16 (52%) migrate during the dry season from the region. The problems of underemployment that community leaders and IPAM (1976) identified as contributing to the study region's significant emigration in the 1970s, have not yet disappeared. As discussed later in this section, however, the problems are somewhat less severe today, due to forestry.

The most common dry-season destinations of Hojanchan seasonal migrant laborers are the Atlantic banana zone and the Valle Central. The coffee harvest in the Valle Central lasts well into January, and in some cases into February. In either case, the worker establishes connections permitting year-to-year employment. This is especially easy in the Valle Central, because of the abundance of relatives that have remained in that coffee region. The Valle Central destinations of these laborers, including Palmares, Atenas, San Ramón and Grecia, often correspond to the towns which the families left one, two, or three generations earlier to settle in Hojancha.

In contrast to the shortage of work in Hojancha during the dry season, labor bottlenecks occur frequently during the rainy season. For example, the melina and teak seedling harvests, and the planting of pochote seeds in
nurseries, occur in May, the ideal time for land preparation, and planting of seeds, for basic grains. Two-thirds of the farm operators interviewed hire labor at some time. Of these, half indicated they encounter difficulties in hiring labor during such bottleneck periods, and must be flexible with such activities as the planting of basic grains, the weeding of basic grains parcels, and the maintenance of coffee trees. Laborers can often choose between two or more jobs during peak labor-demand periods in the wet season.

Most agricultural-related jobs in Hojancha operate under the "jornal," or workday, payment system. The state-established minimum wage, 500 Colones per jornal (working 6 a.m. to 11 a.m.), is the typical wage for all work in basic grains, vegetables, and pastures, and most jobs related to nurseries, reforestation, and maintenance and planting of coffee trees. The coffee and seedling harvests each have a different pay scale. Coffee farmers typically pay 100-120 Colones per cajuela of fruit picked. A rapid worker can earn over 1,000 Colones a day. Nursery operators pay 1-2 Colones per harvested plant. An experienced worker can easily "arrancar" (pull) more than 1,000 plants a day, and possibly more than twice that number if the roots are not too broadly developed. It is important to note that permanent employment of any one person beyond three months is rare, because a farm operator by law would be obligated
to pay 22% of the salary, and the worker 9%, for Social Security. Several nursery operators complain that officials of the Office of Social Security in Hojancha send out inspectors to ensure compliance.

Because of the higher pay, nursery operators tend to have few problems encountering willing laborers during the busy seedling harvests. Farmers attempting to hire labor during that time for chopping pastures, or for the preparation of land in anticipation of the maize or bean plantings, often must postpone these more flexible activities for one or more weeks. Furthermore, many laborers indicated they give first priority to their own family's basic grains production, because it is worth more to the household than the wages earned from working for others.

Hojanchan landless laborer-households that rely on subsistent production of basic grains for part of their livelihood, gain access to land in one of three ways. First, the family can rent a small parcel of land, using part of the wages earned from other activities. The rented parcel that is affordable usually is land of poor quality, suitable for low-technology maize production from May to August, and frijol tapado from September to December. Second, the family may borrow land from a relative, or perhaps a close friend who owes a favor. Likewise, this land tends to be of low quality. The third, and the most
common arrangement is known as "a medias," or the dividing up of the responsibilities and the output. This system can vary, but a typical version involves the landowner providing a small parcel of land, the seeds, fertilizers, and other inputs; the peon provides the labor. The harvest is divided between them, according to a pre-arranged proportion. Usually, the landowner receives one-fourth to one-third of the harvest, but can receive as much as half. The system bears a striking resemblance to the pre-capitalist, antiquated "feudal" productive relations which much of the Latin American peasantry has faced for nearly five centuries (de Janvry 1981).

The coffee harvest, like the seedling harvests, is time-specific and cannot be delayed. Unlike seedling harvests, the coffee harvest involves nearly all members of the family, including small children. Usually, one or more members of the households of small highland farms work off-farm for wages at some point during the year, especially during the coffee harvest. In all cases, interviewees falling into this category indicated that they give priority to their own farm. Once their own harvest is complete, they are free to harvest coffee elsewhere. One reason why the frijol tapado system is popular in the study region is because most of the work associated with the late-season bean crop occurs during the coffee harvest, from September to October, and the tapado system of bean
production requires less labor and, therefore, less conflict with the coffee harvest.

Opinions among laborers regarding reforestation are mixed. By a two-to-one margin, most laborers interviewed feel that nurseries have had a positive impact upon labor markets, alleviating underemployment during the wet season. Indeed, nearly one-third of laborers interviewed across the study region consider nurseries their most important employment activity. By a three-to-one margin, however, laborers believe that plantations of melina, teak, pochote and other hardwoods do not generate sufficient employment, and actually generate fewer workdays on average than pastures. According to CACH unpublished data, reforestation generates about 140 jornales per ha. from land preparation to final harvest. For melina, this represents an average of 10 jornales per year, compared to 6 for pastures. For teak and pochote, this represents about 5 jornales per ha. per year. The concerns of this majority of laborers is not unjustified.

CACH estimates that melina seedling production generates about 300 jornales per ha. per year, teak seedling production employs 335, and pochote 430. This compares with an estimated 155 jornales per ha. per year for maintenance and harvest of coffee (IFAM 1976: 22), 55-85 per ha. per year for maize production, and 35-85 per ha. per year for bean production. Given the high labor
requirements of seedlings and the growing popularity of reforestation, forestry has put the study region one step closer toward alleviating underemployment during the rainy season. Fewer than one-third of laborers interviewed do not work in forestry-related activities at some point during the year. The dry-season employment problem remains, however, and peones continue to rely heavily upon subsistence production of basic grains, and, in many cases, seasonal migration.

Wages remain low in Hojancha, even during the rainy season. This, together with underemployment part of the year, make it difficult for a landless family to save enough money to buy a farm. Meanwhile, as Damais, et.al. (1986: 50) point out, capital continues to flow from households of wage-earners with little or no land, to larger farms. The region's large farms hire this labor at low wages, yet accumulate several times their wage expenditures in profits from cattle, seedlings and coffee.

**Conclusions**

The study region, the heavily-populated northern half of the canton of Hojancha, is a small locality of only 130 square-kilometers, yet it is rich in physical, cultural, and social diversity. Throughout the twentieth century, circumstances and events emanating as much from outside the region (and even the country) as within, have generated changes in the livelihood modes of Hojanchans. Each time,
the social structure emerged more diverse than before. The deepening of the relationships between Hojanchans and extra-regional markets, first through the production of basic grains, then cattle, then coffee, has created through time a more highly differentiated class structure.

As a result of forestry within the locality, human uses of the land and social structure are now more complex than ever. "Middle class" farm owners with modern concrete houses, kitchen appliances, and new four-wheel-drive vehicles, live in close proximity to landless day laborers who have few possessions in addition to their labor power. Several layers have emerged between these extremes. It is typical, for example, for small-scale market-oriented producers of basic grains and coffee to not only hire labor, but hire themselves or family members out as labor, thus defying traditional definitions of class. This "category" of employee-employer household is most common with seedling production. Some minifundistas, and even some landless laborers, have entered the seedling business on a part-time basis, albeit mostly without success, while continuing to work for wages between nursery-related labor bottleneck periods. At the extremes, the traditional social categories of capitalist-employer and proletarian-laborer, have become sharpened with growing disparities between them. Both cattle and seedling production have
accelerated the concentration of resources in fewer hands, fueling a widening social gap.

Ironically, while basic grains have become almost trivial as a market-oriented crop, their importance to the poorest of Hojanchan households is as great as ever. Laborers and minifundistas who struggle with seasonal shortages of work but rely on their own production of maize and beans, are at times better off than those indebted small-scale nursery operators whose resources are tied up in the one activity. No two families, of course, face identical socioeconomic conditions. Each must decide which activities, on- or off-farm, to engage in, based on family need, availability of family labor, availability of off-farm work, and physical farm-related conditions: soils, slope and size. These are in large part the bases for internal diversity within the study region. The "essence" of the region is the coexistence of the diverse human geography, and the uniformity of regional common interest, vis-a-vis other regions. This seeming contradiction is reflected in the contemporary Hojanchan politics of place.
A principal tenet of the approach of critical chorology as elaborated in this dissertation is that the workings of the global economy, with its inherent social structures and spatial systems, are played out differently from place to place. Geographers can identify how capitalism and its production of uneven development as a means of reproducing its social relations, is created and played out in specific ways in specific localities (Entrikin 1991). Implicit in this idea is a bidirectional relationship: specific localities are not simply passive recipients of the workings of the global economy and its inherent structures, but they react to those structures, and even play a role in the shaping of those structures. As the "Zapatistas" of Chiapas, Mexico have recently demonstrated, even the most seemingly powerless of Third World localities is able to achieve some degree of influence in its social and political relationships with "core" localities.

A fundamental purpose for undertaking this study was to gain an understanding of how the Hojancha study region was restructured in such a way that in a period of roughly two decades, it has seen its high rate of emigration halted, and has largely acquired the character of an emerging middle class small-farm stronghold, in many ways
more typical of the Valle Central than Guanacaste. In short, the locality now operates largely within the "semi-periphery," exhibiting some aspects of peripheral areas and some aspects of core areas. Internal class relations, as introduced in the previous two chapters, have played a role in this transformation. So too have global, national, and local economic and political forces, local ecological changes, and land use choices. All these forces have coalesced in different ways, at different times throughout the study region's history, each time producing a unique place, and each time providing the framework for subsequent restructurings.

The purpose of this chapter is to describe the nature of political relations that exist within the study region, and between the study region and San José. Through an examination of the "politics of place," the chapter considers the nature of the empowerment and/or disempowerment of the Hojanchan campesino. That is, the locality is viewed as the setting for interactions, occurring at multiple scales, between elites and subordinate groups. An examination of the politics of place of the Hojancha study region is key to understanding the locality's reversal of fortunes since the 1970s. Hojanchans' use of the political arena to mobilize and pressure the state for subsidies and development of
infrastructure is an underlying feature of the politics of place.

Agnew (1987) makes the case that political behavior, perhaps more than any other social behavior, is not subject to the processes of "homogenization" that modernist versions of social science cite as the outcome of the increasingly interconnected global economy. He (1987: ix) begins the preface to the volume Place and Politics by comparing two localities of northern Italy, similar to each other in size and close by, that have completely different political traditions, one Communist and one Christian Democratic. The different social relations historically characterizing each locality, the different paths of development each has experienced, underlie the contemporary political differences. He concludes that "...political activity is structured and realized through place-specific social processes" (p.ix), and that political life, which is geographically rooted, is best viewed in terms of place histories (p.6). Indeed, Hojancha's own history underlies its atypical political affiliations, as described in this chapter, and by connection, its atypical contemporary economic base, described at length in Chapters Six and Seven.

Though stressing the importance of place-based political behaviors, Agnew (1987: ix-x, 44) does not deny the existence of national political norms. The mediation
that occurs between state and society is carried out in individual localities, and collectively, these interdependent sets of places constitute national-level political systems. Moreover, the World System transcends national boundaries, permitting social relations of production and accumulation to be structured by activities that occur across boundaries. A focus on national-level political life will, therefore, not adequately uncover the political relations between individual localities and the World System. In the case of Hojancha, connections have been established between its community leaders and European and North American development institutions of various kinds, independently of the Costa Rican state. These connections, however, ultimately have enabled Hojancha to play a role, albeit not a major one, in shaping Costa Rican state policies in the realm of forestry.

Costa Rican Exceptionalism: The National Ideology

When considering regional restructuring and the changing human geography of Hojancha, it is appropriate to frame these changes within the longstanding ideology of "Costa Rican exceptionalism" (Edelman and Kenen 1989). The ideology is rooted in a mythic history of agrarian egalitarianism, projected teleologically to assume an almost unbounded reproduction of the yeoman way of life. Its contemporary manifestation centers on the country's social democratic model, created in the early 1940s and
maintained in various forms to the present. The persistence of many of Hojancha's small family farms is in part a result of the workings in the locality of the Costa Rican social democratic model. Likewise, the continued marginalization of a sizeable minority of Hojanchans is linked to the model's tendency to sustain social class distinctions within the community.

The campesino has traditionally been regarded in the national ideology as the backbone of Costa Rica's democratic heritage. Since colonial times the campesino family unit of production has dominated agrarian life. For more than three centuries, a growing population of campesinos could pursue with relative ease an independent subsistence-based existence, free from the bonds of neo-feudal production regimes so common elsewhere in Spanish America. An open frontier for settlement made this possible. It is widely believed that these factors, stemming from the colonial period, are fundamental to the country's egalitarian society.

Spanish colonization began in the sixteenth century. Because of the relative absence of exploitable precious metals and the comparatively small indigenous population, the settlement history of what is now Costa Rica differs from Latin America as a whole. The indigenous population, including the Chorotega discussed in Chapter Three, dwindled soon after the Spaniards' arrival. The fertile
Valle Central, with its pleasant climate and rich volcanic soils, became a preferred settlement zone for subsistence-oriented farm families early on. These families cleared only as much land at a time as they could reasonably work. Their swidden agriculture produced sufficient yields for household needs, and only small surpluses for trade or sale (Augelli 1987: 3-4).

There is wide debate over the existence of social class distinctions in the colonial period between descendants of the original conquistadores and non-elites. Most of the early immigrants were economically marginalized peasants from the Andalucian and Extremaduran regions of Spain, attracted by the availability of land to work by their own labors (Stone 1975: 107; Stone 1989: 21; Seligson 1980: 27-28; Gayle 1986: 69). Hall (1985: 61) has suggested that many of these were Sephardic Jews. An elite class of settlers consisted of the conquistadores, their relatives and offspring, and numerous soldiers, government officials, and "adventurers" who accompanied them (Hall 1985: 61). Since land was abundant, few peasants bothered to gain legal title to the tracts they cleared. Conquistadores, on the other hand, received large land grants from the Spanish Crown (Augelli 1987: 4-5). Augelli (1987) and Seligson (1980) are among the scholars who acknowledge this distinction, but hold that the yeoman class of the colonial period was sufficiently independent
from the elite class, such that an egalitarian yeoman society could emerge from their subsistence economy and the expanding frontier.

Gudmundson (1986: 25-46) and Hall (1985: 131-136) are among the scholars that take a different view of class dynamics in pre-independence, pre-coffee Costa Rica. They insist that a series of hamlets and villages were more important than dispersed households in the Valle Central. Social inequality emerged as lands surrounding these hamlets became fully occupied and extended beyond the point of feasible daily access, forcing many to work as laborers or move to the frontier. According to this interpretation, distinctions between landed and landless members of the yeoman class emerged early on.

Gudmundson (1986) and Samper (1990) argue that rural democracy and egalitarianism were more a product of the post-independence development of coffee beginning in the 1820s. The state invested in roads to ports on both coasts, and instituted land grant policies to encourage coffee-based settlement of frontier areas of the Valle Central and beyond (James 1969: 196-197). According to Gudmundson (1986: 76-82), coffee smallholdings, rather than large estates as in Guatemala and El Salvador, dominated the Costa Rican agricultural landscape from the 1840s until at least 1900. Labor was scarce and expensive. This gave smallholders, which utilized mostly family members as
labor, the advantage over estates, which were burdened with wage costs. (Cardoso 1977: 176-181). It was not until late in the nineteenth century, according to Gudmundson, that disparities between elites and peasants began to take shape. Crowding within the coffee zone, for example, forced migrant settlers to areas of lower elevation, where they produced agricultural commodities of lesser market value than coffee (Booth 1989: 389, 409-410).

Those who argue that the colonial period, rather than the post-independence coffee period, was the embodiment of rural democracy, assert that the transition to coffee culture signalled the demise of rural egalitarianism and stability based on isolation, individualism, and self-sufficiency. The introduction of agrarian capitalism created a social division of labor, rural inequality, and an increase in frontier out-migration from the coffee zone. Urban elites controlled credit and coffee milling and exporting, and were ultimately able to determine the price and profit the smallholder received. Debts and consolidation of landholdings by rural elites proletarianized many peasants and drove others to the frontier (Barry 1991b: 3; Booth 1989: 389, 409-410).

Coinciding with the end of the coffee boom was an acceleration of frontier settlement beyond the crowded Valle Central. Pioneer settlement by the year 1900 had expanded to altitudes higher and lower than the feasible
range of coffee production. Migration to Guanacaste, the Valle General and other outlying zones with comparatively poor soils was well underway by 1930 (James 1969: 197; Bozzoli de Wille 1981; Gudmundson 1986: 5, 132-133). Whether embracing capitalism or escaping proletarianization, high land prices, debt or crowded conditions, landless Costa Ricans expanded settlement beyond the original coffee core region.

Until recent decades, colonization to such areas as the Nicoya highlands was spontaneous and unplanned, characterized by isolated farmsteads, disorganized hamlets, shifting cultivation, and soil exhaustion resulting from wasteful farming practices. Until the final closing of the frontier in the early 1960s, when settlement had reached all sections of the country and no more unclaimed land remained, a perception of the existence of unlimited virgin lands at the frontier occupied the mindset of frontier settlers (Augelli 1987: 5). Once lands became degraded the pioneers left them behind (Parsons 1963: 453), and the frontier "safety valve" was no longer available to offer independence and relative egalitarianism to campesinos.

The version of Costa Rican history that places the country's egalitarian democratic heritage within the colonial period is the most common. That version, however, does not overlook the fact that post-independence smallholders dominated coffee farming to a much greater
extent than elsewhere in Central America. The ideology of Costa Rican exceptionalism, based in part on one or both of these interpretations of the country's history, is maintained in schools and the mass media by historians, business leaders and politicians. It is unquestioningly accepted as truth by most Costa Ricans (Booth 1989: 387; Biesanz 1982: 47). Empirical evidence, however, suggests that aspects of the myth are indeed open to questioning. For instance, during most of the twentieth century, the independent Costa Rican self-employed peasant farmer has been in a state of social and economic decline. Today, the majority of rural Costa Ricans are landless or land-poor laborers, unable to make a living strictly from the family landholding (Blachman and Hellman 1986: 157, 164).

The Biesanzes (1982: 70) speculate that the myth of egalitarianism serves to ease the guilt of the wealthy while easing the anxiety of the poor. The complacency generated by the myth may in fact create a barrier to the awareness of disparities. In some respects, the disparities are made less severe by the presence of the welfare state, which has intentionally created a "safety net" that serves in part to perpetuate the ideology of exceptionalism. This feature of social democracy, the basis of the contemporary form of the myth, has played a major part in Hojancha's post-1970s regional restructuring.
The social democracy that emerged in Costa Rican politics in the 1940s has largely been maintained to the present. The proponents of the social democratic welfare state uphold it as the basis of the country's continued relative stability, an anomaly in the turbulent Central America of the twentieth century (Barry 1991a: 87). Although first implemented by President Rafael Calderón Guardia, a Social Christian, in the 1940s, reforms characterizing Costa Rica's social democracy have subsequently been more vigorously upheld and expanded under various administrations of the Partido Liberación Nacional, or National Liberation Party (PLN). In more recent decades, the Partido Unidad Social Cristiano, or Social Christian Unity Party (PUSC), which traces its origins back to Calderón, have made deliberate attempts to eliminate or scale back many of the social democratic programs which Calderón began and which the PLN has generally tried to maintain (Barry 1991b).

While Calderón implemented social security for the ill and a strong labor code, it was the PLN's founder, "Don Pepe" Figueres, who nationalized the banking system and outlawed the army in 1948. Subsequent PLN administrations have enacted policies raising wages, increasing social security health care coverage, implementing modest land reform, subsidizing food crop prices, building infrastructure, and providing subsidized housing for the
poor (Edelman and Kenen 1989: 87-88, 123-125; Rovira 1988). Costa Rican social democracy, as elaborated by the PLN, has sought by means of a strong bureaucracy, to increase the state’s involvement in the economy (Garita 1981).

The sociologist Diego Palma (1980) explains that all along, the social democratic policies of the PLN have involved the "pseudoparticipation" of different groups in the process of reform. The existence of a strong bureaucracy has in fact co-opted citizen participation by making only those concessions necessary, such as enacting limited agrarian reform, to pacify the peasantry and other segments of society. In metaphorical terms, the state has opened a number of escape valves to relieve pressure, as the need arises. As this case study illustrates, leading citizens of Hojancha have found ways to manipulate these escape valve openings.

**Hojancha and the Politics of Place**

The area that is now Hojancha was for over half a century a frontier settlement destination, one small example of the national safety valve that perpetuated the hopes of campesinos seeking landowning opportunities and escaping economic marginalization in the western end of the crowded Valle Central. Since the closing of the Nicoyan frontier in the 1950s, new escape valves have been opened through the functioning of PLN-style social democracy. This has been most obvious in four realms: the creation of
Hojancha’s political boundaries; the development of infrastructure; housing subsidies; and forestry subsidies. As a result, Hojancha is a PLN stronghold.

Politically, the region that is now Hojancha remained through the 1950s a peripheral portion of the canton of Nicoya, whose seat, the city of Nicoya, is located in the peninsula’s lowlands, a zone more accessible to areas of commerce. The first all-weather roads constructed into the Nicoya Peninsula linked the town of Nicoya with more heavily populated settlements of Guanacaste. The Nicoya-Liberia road was the first on the peninsula to be paved. Hojancha’s priest, Padre Luis Vara, himself an ardent social democrat, recognized in the early 1960s that the hilly Hojancha sub-region of Nicoya canton was constantly overlooked in matters of infrastructure and other development. Because of its relatively poor access, Hojancha faced greater difficulties than lowland Nicoyan settlements in trade.

With help from his PLN connections in the National Assembly, Padre Vara succeeded in establishing Hojancha as a "distrito" (district) within the canton of Nicoya in 1966 (Comunidades 1990: 4). As a district, Hojancha would then have more visibility to work at the cantonal, provincial, and national levels to lobby for assistance. In the 1960s, during the administration of PLN President Francisco Orlich (1962-66), Hojancha received donations for development,
including a tractor for road improvements (Vara 1993). Also in that decade, in response to the priest's lobbying efforts, the federal government built a school in Hojancha and implemented a program through the Agrarian Reform Institute (IDA) to provide land titles to those Hojanchans lacking them (Vara 1993).

Padre Vara and other community leaders recognized early in that decade the need to develop marketing opportunities for Hojanchan agricultural products. Figueres and subsequent PLN leaders have been strongly committed to coffee cooperatives as a means of pooling small-scale producers, and empowering them in product and credit markets. Such markets typically have favored the traditional agro-export oligarchy (Cazanga 1987). In 1962, Luis Vara, with the help of allies within the Orlich Administration and in the Department of Cooperatives of the National Bank of Costa Rica (BNCR), successfully mobilized 23 coffee producers to form a coffee cooperative, Coope-Pilangosta, R.L. (El Ganadero 1993). As a result of the formation of this cooperative and its processing facility, or beneficio, Hojancha's coffee producers have been largely able to overcome their locational disadvantages in the marketing of the bean and in obtaining credit.

Between 1970 and 1974, when Don Pepe Figueres was president for his last time, another wave of activities occurred in Hojanchan development. In 1971, Padre Vara,
through his PLN connections, succeeded in getting Hojancha established as a separate canton. This enabled Hojancha to become completely independent from Nicoya, and to lobby the state more directly. The following year, electrification arrived in the canton (Comunidades 1990: 4). During the PLN presidency of Daniel Oduber (1974-78), the technical high school and the modern health clinic were constructed in Hojancha, and a water system was installed to serve the homes of the town of Hojancha. Again, Luis Vara and his PLN connections made these developments possible.

In general, there are three avenues which Hojanchans have pursued, in order to lobby for assistance from the state. Most commonly, they approach the local "diputado," or Representative from the National Assembly. In some cases, depending on the assistance sought, it is more pragmatic to make contact directly with the appropriate government ministry. Finally, under certain circumstances, the President of the Republic is lobbied directly. Luis Vara has made effective use of all three options.

Typically, the community decides through consensus what projects or aims it will pursue through government channels. Hojanchan community leaders participate in a Consejo Desarrollo Regional, or Regional Development Council, a consultative, as opposed to executive, committee that operates at two levels. Operating at one level is the committee of the "Chorotega Region," one of Costa Rica's...
six planning regions, including the Province of Guanacaste and part of neighboring Alajuela Province. At the second level is the committee of the canton of Hojancha.

The regional-level committee consists of representatives from each of the 11 cantones of the Chorotega Region, who collectively decide which large-scale (regional) problems or projects need to be addressed. Once decisions are made, typically the Ministry of Planning in San José is approached. The canton-level committee consists of representatives of each productive sector, service sector, and organization in Hojancha, who decide which projects specific to the canton should be pursued. One or more members of the council usually approach the local diputado with requests for assistance. The appropriate ministry in San José is contacted directly in some cases, such as when the local diputado is not of the PLN, and/or if none of Guanacaste's five diputados, elected under a proportional representation system, is from Hojancha. The priest and nearly all other community leaders of Hojancha are members of the PLN. For this reason, PUSC diputados tend to be much less responsive (Garcia 1993; Lopez 1993; Marin 1993; Rodríguez 1993; Vazquez 1993, et.al.). So too, are non-Hojanchan diputados (Marin 1993). Frequently, since Hojancha's formation as a canton and even before, Padre Vara has bypassed this process, and approached diputados, ministries, and even
Presidents directly. Again, success depends largely on whether these officials are members of the PLN (Marin 1993; Garcia 1993).

Luis Vara has been described by a variety of Hojanchans as having a clear vision: development for Hojancha and an improved standard of living for its people. To achieve these ends, he created what can best be described as a political machine, consisting of like-minded PLN ideologues in Hojancha. Not unexpectedly, a rift developed in the mid-1980s, which remains to date. Disagreements between Vara and former allies emerged over his leadership style and the role of forestry in Hojancha's development, an activity that would come to define contemporary Hojanchan regional identity.

Given the poverty, emigration, and environmental degradation of the 1960s and 1970s, Padre Vara recognized the need for the canton to form its own agricultural center for raising funds to finance reforestation and research for improving the community's coffee and basic grains crops. In the mid-1970s, the state, as a result of a joint study of the country's rural communities between IFAM (The Municipal Advisory and Promotion Institute) and AITEC, the U.S.-based Acción Internacional Técnica, pronounced Hojancha one of two communities with the least economic opportunities in all of Costa Rica (IFAM 1976). As a result, in 1978, Vara's political machine and the
municipality government of Hojancha successfully lobbied the Oduber Administration to establish CACH. A cantonal agricultural center was preferable to a cooperative, because under Costa Rican law, it could directly receive more state aid (Rodríguez 1993).

The Oduber Administration sent several agronomists and other technicians to assist in the establishment of CACH. The municipality's government and Luis Vara were influential in receiving a land grant for the CACH building and its first tree seedling nursery. AITEC donated funds for salaries and transportation expenses for four years, after which time CACH was supposed to be self-sufficient. A portion of the interest on loans to campesinos goes to CACH's operating expenses. In 1981, an agreement with the Inter-American Foundation (IAF) provided $235,000 (U.S.) for establishing reforestation in the canton (Rodríguez 1993). The funds financed vehicles for CACH, the hiring of technical personnel, and subsidies for reforestation demonstration plots. Luis Vara is widely credited with "planting the seeds" for the idea of development in the community, and establishing Hojancha's image as a well-organized place with hard-working, motivated people.

By the mid-1980s, the rift had emerged within the priest's political machine. On one side were Vara and some of his closest followers who wanted to de-emphasize forestry somewhat, and instead emphasize a more integrated,
multi-activity rural development that included forestry and other activities. On the other side were several members of his political machine and the municipality government who favored a stronger emphasis on forestry. To strengthen his hand, Vara lobbied President Alberto Monge directly to have his hand-picked candidate for diputado, Angel Marin, the president of Hojancha’s technical high school, placed in a favorable position on the ballot for the 1986 election. In the Costa Rican National Assembly’s system of proportional representation, voters vote for a slate of candidates, whose chances of winning are determined by the number of votes for their party, as well as their ranking on the ballot. Because of Vara’s lobbying efforts, Angel Marin was placed in the third ballot position, and PLN gained three of Guanacaste’s five seats.

Despite Vara’s success, the pro-forestry forces in Hojancha eventually won. CACH officials and the municipality President successfully lobbied for state aid for forestry. Padre Vara astonished the community when he arranged to have himself installed as the high school president, replacing Angel Marin, and then attempted to have the high school become the official receiver and distributor of the CAF and FDF funds earmarked for forestry development in Hojancha. He was unsuccessful in this effort to control the forestry funds; CACH officially receives the funds (Marin 1993).
CACH, working independently of the priest, has in many ways successfully transformed the economic landscape of Hojancha. The organization continues to lobby the state, as well as international development agencies such as the IDB, for subsidized credit and grants for the continuation of the reforestation (Valverde 1993). As discussed in Chapter Six, the forestry has benefitted some, but not all of Hojancha's campesinos. Tree seedling markets, for example, are structured in such a way that a few nursery owners, typically relatives and friends of CACH employees, dominate the information flow regarding market demand and prices for each seedling species. Consequently, the remaining nursery operators rely on these few nursery owners to market their seedlings for them. A process of social class formation arises out of seedling marketing, as some nursery operators abandon that activity while others prosper at their expense.

In the minds of many Hojanchans, employees of CACH and the coffee cooperative, and these employees' relatives, have monopolized the development process in recent years to their own personal benefit. In addition to several nursery operators who expressed these sentiments, a small number of producers interviewed that are skeptical of reforestation, regard the leaders of the CACH-cooperative alliance as elites and untrustworthy. One campesino of the canton's highlands expressed her belief that CACH officials
orchestrate land use planning for their own benefit: it promotes reforestation all over the canton, convincing smallholders to tie up valuable land in trees, in order to improve the water resources downstream, where the CACH officials live, with little or no benefit to highlanders. Other Hojanchans have criticized CACH as being out of touch with the community, and staffed by several "outsiders" (non-Hojanchans) who do not know the people and their problems personally.

There is talk of "The Group of Fifteen," which includes current and former directors of CACH and Coope-Pilangosta, as well as several elected municipality officials, who together control decision making with respect to the spending of revenues and the lobbying of the state through the cantonal committee of the Regional Development Council. The Group of Fifteen, whether or not it is in fact a dictatorial committee as some Hojanchans suggest, represents the opposition to Luis Vara. Until the early 1980s, the group had been allied with Vara.

The rift between former allies was most visible during the events leading up to the 1993 PLN "pre-elección," or primary election. In July, the same time that the party held its nationwide primary for presidential candidates, it held a non-binding nationwide primary for candidates for diputado. PLN officials in San Jose decide which candidates will appear on the ballot in the official
election against the PUSC, and in what order, based in part on the vote outcome in local areas during the pre-election. Each candidate for diputado runs on a slate with a PLN presidential candidate. Hojancha's two candidates for diputado were Oscar Campos, Director of Coope-Pilangosta and member of the Group of Fifteen, and Felix Vazquez, the priest's hand-picked candidate and Director of La Asociación sin Fronteras, the priest's housing subsidy organization. Interestingly, both Campos and Vazquez ran on slates with the front-running presidential candidate, José María Figueres, son of the late President Don Pepe Figueres.

The often dirty campaign included open criticisms launched by Vazquez and his campaign workers of Campos, the Group of Fifteen, and their "elitism." Campos, who has a strong following in the community, did not feel the need to counter with negative campaign tactics, though many of his followers openly criticized the priest as a "dictator" surrounded by "incompetent people." Such conversations about the campaign could frequently be heard in the town of Hojancha and surrounding villages of the canton. Bumper stickers and campaign signs bearing the candidates' names along with Figueres's, were everywhere in the study region. When registered "liberacionistas" (PLN voters) went to the polls, Campos won with approximately 85 percent of the vote. Apparently, though many Hojanchans are distrustful
of the Group of Fifteen and their rapidly increasing standard of living, they are even more distrustful of Padre Vara's waning political machine, and especially his closest associates.

In 1989, Luis Vara established a campesino development organization to rival the CACH-cooperative alliance. CEMPRODECA, the Center for Campesino Development and Promotion, is a non-profit, non-governmental organization (NGO) that seeks donations and low-interest loans from a variety of sources, including the Costa Rican government, the IDB, and Catholic Relief Agencies. Its office is located within the church complex. CEMPRODECA attempts to offer low-interest loans to small-scale producers wishing to diversify household production into cash-earning activities, such as vegetables, fruit trees, crafts, and small pulperias. The organization has been criticized for duplicating the efforts of CACH. Because it is not a "centro agrícola cantonal" (cantonal agricultural center) like CACH, CEMPRODECA cannot as easily receive grants or donations directly from the state, but must rely more on philanthropic organizations.

The claim by some allies of the priest that Coope-Pilangosta and its director, Oscar Campos, are concerned only for the rich, is exaggerated. It is true the cooperative does exhibit some aspects of a capitalist enterprise. For example, not all the profits from the sale
of coffee go to producers; some end up as salaries and perks for cooperative employees. On the other hand, Campos has successfully negotiated an agreement with the Max Havelaar Organization, a European social democratic philanthropic organization that markets the products of Third World smallholders in Europe. Because of the efforts of Campos, Max Havelaar will begin purchasing coffee from Coope-Pilangosta and six other coffee cooperatives of northwestern Costa Rica at prices higher than the global (New York spot) market price. Part of the extra profits will be paid to producers, and part will be donated by the Havelaar organization to reforestation and technical assistance projects in northwestern Costa Rica (Campos 1993; El Ganadero 1993b: 31).

An examination of the agricultural-related loans granted by Hojancha’s four major lending organizations offers an indication of the relative influence of each organization, and the relative strength of each productive sector (Table 8-1). In 1992, for example, CEMPRODECA accounted for about 10 percent of total loans dedicated to agricultural activities and related microbusinesses. These loans were granted to small-scale producers. CACH and the National Bank of Costa Rica (BNCR) accounted for 38 and 39 percent, respectively. The bank’s agricultural loans are overwhelmingly granted to medium- and large-scale cattle producers in the study area. CACH loans are granted for a
TABLE 8-1
AGRICULTURE-RELATED LOANS IN HOJANCHA, 1992
(In 1000s of Colones)

<table>
<thead>
<tr>
<th>INSTITUTION</th>
<th>TOTAL 1992</th>
<th>CATTLE</th>
<th>COFFEE</th>
<th>FORESTRY</th>
<th>OTHER USES</th>
</tr>
</thead>
<tbody>
<tr>
<td>BNCR</td>
<td>31,700</td>
<td>26,100</td>
<td>2,100</td>
<td>3,500</td>
<td></td>
</tr>
<tr>
<td>CACH</td>
<td>30,552</td>
<td>4,370</td>
<td>18,790</td>
<td>7,392</td>
<td></td>
</tr>
<tr>
<td>CEMPRODECA</td>
<td>8,546</td>
<td></td>
<td></td>
<td></td>
<td>8,546</td>
</tr>
<tr>
<td>Coope-Pilangosta</td>
<td>9,619</td>
<td></td>
<td>9,619</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTALS</td>
<td>80,417</td>
<td>30,470</td>
<td>9,619</td>
<td>20,890</td>
<td>19,438</td>
</tr>
</tbody>
</table>


variety of uses, primarily nursery-establishment, medium- and large-scale cattle production, and microbusinesses such as woodworking shops. The risk-reduction policies of both CACH and BNCR are strict, yielding smallholders a disproportionately small share of the loans. The claims by CEMPRODECA and others that CACH loans are granted disproportionately to relatives and political associates of the organization's employees are not entirely unfounded. Several such associates and relatives have received large loans for such things as nurseries, cattle production, and even a store off the town square. Not all smallholders are forced to rely exclusively on CEMPRODECA for credit. In some cases, small nursery operators have received CACH
loans for that purpose. Coope-Pilangosta offers credit to most coffee smallholders that request it.

The canton's recent examples of raised living standards are not limited to those families prospering from coffee production or forestry. A vigorous housing subsidy program, initiated by the PLN administration of Oscar Arias, was implemented in 1986 in Hojancha under the leadership of Luis Vara. Since its establishment, more than 1,600 subsidized cement houses have been constructed in the Nicoya Peninsula, all of which have been administered out of Vara's Hojancha office, La Asociación Cristiana sin Fronteras, directed by Felix Vazquez (Table 8-2). Of the 1,200 houses in the entire canton of Hojancha, 439 (37 percent) are concrete houses subsidized under this program (Vazquez 1993). Two-thirds of the peninsula's subsidized houses were funded under the PLN administration of Oscar Arias, and one-third under the PUSC administration of Rafael Calderón, indicating the PLN's stronger commitment to the welfare state. Calderón's administration changed some bylaws to make the client pay more of the legal, administrative and engineering costs (Vazquez 1993). A count of the houses in the town of Hojancha reveals that 57 percent are totally concrete, many of which are subsidized, while 36 percent are of the older, but still modern, concrete-wood type described in Chapter
Seven. The town has the appearance of a middle-class community, especially in terms of housing.

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**TABLE 8-2**

**HOUSING SUBSIDIES ADMINISTERED BY HOJANCHA'S HOUSING OFFICE, 1987-93**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NUMBER OF HOUSING SUBSIDIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>70*</td>
</tr>
<tr>
<td>1988</td>
<td>155*</td>
</tr>
<tr>
<td>1989</td>
<td>311*</td>
</tr>
<tr>
<td>1990</td>
<td>540*</td>
</tr>
<tr>
<td>1991</td>
<td>355</td>
</tr>
<tr>
<td>1992</td>
<td>113</td>
</tr>
<tr>
<td>1993</td>
<td>80</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,624</td>
</tr>
</tbody>
</table>

*Subsidies approved under PLN (Arias) Administration

Number approved under Arias (PLN)=1,076 (269 per year)
Number approved under Calderón (PUSC)=548 (183 per year)


Because of Hojanchans' successes at lobbying for development funding, housing subsidies, and other aid from PLN administrations, it is no wonder that the canton consistently supports the PLN at the poles. According to the President of Hojancha’s Chamber of Cattlemen, the PLN also favors the small farm sector of Costa Rican society. Party officials tend to promote such legislation as protectionism, to guard against cheaper imported beef and food grains from other Central American countries with lower wages (Vargas Quesada 1993).
As a result of PLN policies regarding smallholders and housing, Hojancha, a smallholder stronghold, has been the most "liberacionista" of all Costa Rica's 81 cantones, in all six presidential elections since its establishment as a canton (Table 8-3). Even in years when PLN has lost the national election, a majority of Hojanchans voted PLN. Such strong PLN support is not the case in the other ten cantones of Guanacaste Province (Tribunal Supremo de Elecciones 1974, 1978, 1982, 1986, 1990; Valverde 1994). According to Rolando Araya, nephew of PLN President Alberto Monge (1982-86) and himself a pre-candidate for the PLN presidential nomination in 1993, the remarkably strong

<table>
<thead>
<tr>
<th>Election Year</th>
<th>% Hojanchan Vote for PLN</th>
<th>% Guanacastecan Vote for PLN</th>
<th>% Costa Rican Vote for PLN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974</td>
<td>68.6</td>
<td>49.6</td>
<td>43.4</td>
</tr>
<tr>
<td>1978</td>
<td>66.5</td>
<td>46.2</td>
<td>43.8</td>
</tr>
<tr>
<td>1982</td>
<td>77.0</td>
<td>60.7</td>
<td>58.8</td>
</tr>
<tr>
<td>1986</td>
<td>66.9</td>
<td>50.1</td>
<td>52.3</td>
</tr>
<tr>
<td>1990</td>
<td>64.1</td>
<td>45.5</td>
<td>47.4</td>
</tr>
<tr>
<td>1994</td>
<td>64.8</td>
<td>n.d.</td>
<td>49.6</td>
</tr>
</tbody>
</table>

Sources: Tribunal Supremo de Elecciones de la República de Costa Rica; Valverde 1994.
support for the PLN in Hojancha, and the strong assistance to Hojancha by PLN administrations, are no accident: the two phenomena are mutually reinforcing components of the politics of place characterizing Hojancha.

**Conclusions: Local Agency and the Construction of Hojanchan Regional Identity**

Marx, the student of Hegel, knew perfectly well that the means are themselves the end in the process of becoming. (Harrington 1990: 38).

Small farm forestry and favorable coffee prices alone are not responsible for shaping Hojancha's contemporary regional identity. Other examples of human agency abound. As Harrington suggested, a group of people, in the process of transforming their material conditions, develop a sense of comradery, a knowledge of how to work together. As the Hojancha case study exemplifies, this idea has regional relevance. Through its efforts to reverse poverty, the region developed the capacity to alter the social, political and economic structures that condition(ed) its participation in the national economy and the World System. The effect is cumulative, characterized by a momentum that is tied to Hojanchans' perceptions of (their) place.

One owner of a "soda," or family-style diner, in Hojancha remarked that the region's uniqueness is a matter of scale: the community is small enough that it is possible to organize. In his view, anyone, not just the wealthy, can be part of an organization in Hojancha. At the same
time, the community is large enough to constitute a sufficiently visible force, not to be ignored outside the canton. The diversity of concerns, problems and viewpoints in the community, propagates the formation of groups and associations.

One organization that has spun off from the formation of CACH is a women's cooperative, La Asociación de Mujeres de Hojancha. Founded in 1991, the cooperative of 11 women manufactures clothing for sale in Nicoya, and through a wholesaler in San Jose. Donations by CACH, Coope-Pilangosta, U.S.AID, The Peace Corps and a Canadian agency, Youth Challenge International, enabled the women to purchase a small lot in town and contract to have a small building constructed that doubles as a retail outlet and meeting space. Most of the sewing work is done individually in the home. In the early stages, the women democratically decided which activity the group would engage in. It was decided that the greatest collective skill, and the greatest product demand, were clothing. They elected to receive an hourly wage of 150 Colones ($1.08) from the profits, with the remainder reinvested back into the business to buy materials and to pay off the property. The women generally agree they have benefitted from the experience of group action. One problem they face, however, is competition from maquiladoras, foreign-owned factories that produce clothing in much greater
quantities and at lower costs, due to economies of scale, lower wages, and capital intensity (K. Lopez 1993).

In 1992, an accountant of CACH formed the "comité de cultura," a committee to lobby the Ministry of Culture to construct a "casa de cultura" in Hojancha. She established the necessary connections to convince the ministry to visit Hojancha, and evaluate the community for its feasibility to receive and support a community cultural center. Because of the ministry's positive impressions of Hojancha, its sense of community, and its ability to organize, the canton was selected to receive one of only three cultural centers to be constructed in Costa Rica over the next several years. Apparently, never before had a community formed a cultural committee so quickly that was successful.

In 1993, a group of women and men that own shops, sodas and other related businesses, formed a Chamber of Tourism to promote that activity in the study region. The idea is to tap into the tourism traffic that passes through the canton on the way to and from the beach resort community of Puerto Carrillo. Because of the locality's nationwide reputation as a progressive smallholder stronghold and center of forestry-related activities, the chamber plans to promote Hojancha as a destination for "agroecotourism," an alternative to the homogeneous beach resorts of the country's Pacific coast (Morales Chaves 1993).
A region's identity, or "uniqueness" is perhaps best elaborated by persons familiar with it but not native to it. A small number of non-native Hojanchans were interviewed for their impressions. Nearly all commented that Hojanchan campesinos are different in many ways from those of the rest of Guanacaste, not only for their strong sense of municipal organization, but because of their "drive" to "get ahead" economically. Outsiders frequently complain that Hojancha is heavily populated by "choriceros," a term which roughly translates to "wheeler-dealers." Because so many of them are part-time intermediarios for a number of different products and services, as a means of supplementing farm income, they are considered to have a mindset of constant profit-seeking. Indeed, this researcher was approached on more than one occasion by eager Hojanchans offering their services as middlemen if he would import used cars from the United States.

In short, Hojancha's contemporary regional restructuring and regional identity are, in the minds of many Costa Ricans, synonymous with upward social mobility. The latter, in-turn, is strongly linked to the social democratic maneuverings of various PLN administrations of the past three decades in San José, and PLN-ideologue community leaders in Hojancha. The PLN's attention to Hojancha and its needs has served to legitimize, in the
eyes of most Hojanchans, the state and its overall promotion of export-oriented capital accumulation.

A close inspection of "Hojanchan exceptionalism," however, reveals that the benefits of Hojancha's social democratic development efforts are not shared equally. For the bulk of the region's farm families, the creation and operation of CACH, Coope-Pilangosta, and CEMPRODECA are only partially empowering. The input of most local Hojanchans is minimized. These organizations are run by bureaucrats, local elites who have the final word on the granting of credit and subsidies. These organizations clearly have provided greater opportunities for upward social mobility to their directors, employees and relatives than to their constituents as a whole.

Many members of the community in fact remain left behind. Forestry, subsidized housing, and higher coffee prices have not yet translated to the development of, for example, Matambú. If smallholder products continue to suffer declining terms of trade, and if wages and employment opportunities do not increase significantly, Hojanchan regional identity in the future will likely include such words as "poverty," "disparity," and perhaps even "despair," as in the past.
CHAPTER NINE
SUMMARY AND CONCLUSIONS

It is suggested in this dissertation that a complete, or "holistic" description of a locality or small region should include, but not be limited to, those features associated with traditional, descriptive regional geography: physical environment, land uses, cultural traditions, demographics, and the like. Given the increasingly interdependent nature of the contemporary global economy, the studies of regions, to be truly insightful, should address the nature of the connections between the region in question and the always-shifting World System. At the same time, the World System is best viewed as being "played out" in a multitude of localities, each of which permits the observer a "peek" at the system's inner workings. Critical chorology, as elaborated in this work, is an expansion of traditional regional geography that places a strong emphasis on these extra-locality connections, as well as the intra-regional forces that shape these connections.

The approach of critical chorology, therefore, is basically an enhanced version of the new regional geography intended to be employed in studies of restructuring of localities throughout the Third World. Because family farming in its many forms is still the predominant means for deploying labor in most localities in the developing
world, the environment would out of necessity be an important component of such studies. This emphasis is perhaps the primary way in which critical chorology differs from the new regional geography. While political ecology considers the political economic bases of environmental change, it tends to place little emphasis on the meaning of place and the formation of place around some political activity or cause, two essential components of critical chorology. Each Third World locality is unique; therefore, the issues that are relevant to Hojancha’s regional restructuring will not necessarily be relevant elsewhere. Political behaviors and biographies will also differ.

The Hojancha case study of critical chorology has demonstrated that the workings of a political system at multiple levels, from local to national, is pertinent to a region’s construction. Hojancha, the canton, came about as a result of such political processes, driven by the priest’s and other local leaders’ efforts to develop political connections at the national level. The locality’s living standards are determined in large part by political maneuverings at different levels: housing and forestry subsidies from the national government; the workings of the social democratic welfare state in matters of education, health care and infrastructure; and the differential granting of credit by local institutions such
as CACH, the coffee cooperative, CEMPRODECA, and the local branch of the National Bank.

These political maneuverings, by providing many Hojanchan campesinos a means of achieving upward social mobility, serve to legitimize the existing social system of capital accumulation, and its characteristic class structure. Those Hojanchans who remain in poverty are seemingly pacified by the existence of the social welfare safety net, and by the study region's own ideology, based on the hopes and possibilities of a better life, an ideology furthered by community leaders in their everyday discourse.

In Chapter Two, I discussed several ways in which the study of regions can make significant contributions to contemporary social science. Hojancha as a case study serves to illustrate the usefulness of a regional perspective on social processes. First, geographically uneven development under capitalism is produced at multiple scales, and each region or locality has its "place" in that development. Hojancha has exhibited uneven development in its recent history. For the first six decades of the twentieth century, Hojancha produced modest quantities of food crops and cattle for distant markets. Surplus accrued to merchants of the Valle Central who controlled the marketing. Its remote location and the high transportation costs, borne by its producers, served to marginalize the
region. Poverty increased as the prices Hojanchan campesinos received for their farm products failed to keep up with increases in costs of production, crop marketing, and consumer goods.

A subsequent boom in coffee markets in the late 1950s and early 1960s enabled many smallholders of Hojancha's highlands to persist, and even prosper. As explained in Chapter Seven, the Hojanchan highlands became, along with the Valle Central and other coffee regions of Costa Rica, one of the few places in Central America where upward social mobility was enjoyed by campesinos to more than a modest degree. Lowland Hojanchan smallholders, however, largely suffered from the effects of increased concentration of cattle production in fewer hands at the time. Forestry-related activities, particularly seedling production, have provided a new basis for persistence or even economic improvement for many smallholders, but unemployment or even farm loss for others. In short, throughout the twentieth century, Hojancha has at various times developed, and at other times has suffered economic hardship. Still other times, it has exhibited simultaneous development and marginalization, or geographically uneven development within the locality.

Second, regions are spatial expressions of the global division of labor, in which individual regions play different roles. In addition to the production of cattle,
coffee, food crops and forestry products for local, national and/or international markets, Hojancha has provided the coffee and banana regions with laborers. One or more members of the most marginalized families of the study area are forced to migrate seasonally, and in some cases more permanently. Those who hire this labor profit by doing so, and in this way, Hojancha provides those regions a source of capital.

Third, the region is the spatial expression of the interaction of political processes at different scales. As discussed in Chapter Eight, the campesinos and other people of that portion of the Nicoya Peninsula's interior perceived a common plight. The community, which coincided territorially with the watershed of the Nosara river, came together in an effort to reverse economic and political marginalization and environmental degradation. The establishment of this territory first as a district, then as a canton, came about because of the common effort that its inhabitants identified, and the leadership of Padre Luis Vara. These political exercises created the foundation and momentum for subsequent political maneuverings by Hojancha's community leaders.

Finally, region or locality is a significant component of the theory of "structuration" as elaborated by Giddens (1984). The locality is the spatial setting for interactions between human initiative (agency) and
politically-reinforced economic structures. As humans in capitalist societies engage in work and/or trade, under conditions (i.e., social and economic structures) not of their own making, their everyday lives take on "routines" that occur and reoccur in space. Their attempts to modify the structures, to render their everyday routines more palatable, likewise are place-contingent. These connected, spatially-intersecting occurrences give rise to specific regions, or localities.

In the carrying out of their everyday livelihoods, the people of the Hojancha study region interact with each other typically even more than with people of neighboring cantones who may in fact be closer by. Such patterns have developed historically, and form the basis for Hojancha's "structuration of campesino persistence." Community and business leaders in the town of Hojancha, the study area's primary node, have historically interacted on an everyday basis with farm and laborer families of surrounding villages; to legitimize and solidify their positions of influence, these leaders attempt to work on behalf of these people in national and international political and economic spheres. The priest's political lobbying efforts, the establishment of the agreement involving the coffee cooperative and the Max Havelaar Foundation, and CACH's efforts to gain resources for the study region's forestry, serve as examples of this structuration.
In short, the Hojancha study region is defined in large part by interacted sets of routinized social practices functioning at different levels: peasants, community elites, and national and international power brokers. Hojancha's regional identity is reinforced by interactions between Hojanchan campesinos and its community leaders. Likewise, the continued development of relations between Hojanchan community leaders and "outside" political and economic forces, such as the state, constructs and reinforces the region's identity.

Critical chorology, in its treatment of regions, does not consider social, political and economic practices in isolation from the physical setting. The Hojancha study region is defined as much by human transformations of nature as by social interactions. In fact, physical landscape changes and social interactions are linked, and historically contingent. The regional geography of Hojancha has been reconstructed through a series of political-ecological conjunctures.

Chapter Three provides a description of the physical geography and the pre-Columbian and Spaniard settlement histories of the Nicoya Peninsula and Hojancha. Prior to the twentieth century, Chorotegans escaping crowded haciendas cleared the first agricultural fields out of the extensive forests of the low but rugged central Nicoyan mountains and the isolated altiplanos of the zone. Chapter
Four describes the settlement patterns and economy of the study region in the first half of the twentieth century. Settlers escaping crowded conditions in the western end of the Valle Central in the twentieth century subsequently occupied and expanded these fields. The latter process was accelerated by the linkage of the region to national and global agricultural products markets, and the development of local land markets, early in the century. As the region became more dependent on selling food crops, cattle, and coffee to Valle Central markets, campesinos produced fewer (and purchased more) of their household needs. As a result, they became more deeply dependent upon market-oriented production. As national food crop markets expanded, Hojancha's locational disadvantages became apparent. The boom in cattle markets beginning in the 1950s, enabled Hojanchans with sufficient landholdings to escape the poverty accompanying the locational disadvantages in food crop markets.

The conjuncture of favorable international beef markets and weakened basic grains markets by the late 1950s resulted in a concentration of Hojanchan farmland in fewer hands. The land-extensive nature of cattle production enticed Hojanchan cattle producers to extend grazing onto steeply sloped, fallow and forested lands. The capital accumulated from the cattle boom financed additional land purchases and the expansion of grazing by a few Hojanchan
cattle-producer families. The resulting land degradation, primarily soil erosion and soil exhaustion, rendered much of Hojancha's farmland useless for agricultural activities other than cattle grazing. Unemployment, driven by the land-extensive cattle culture, reinforced the need for smallholders to sell land.

Coffee producers in the canton's highlands, meanwhile, responded to additional coalescing events. The international coffee glut of the latter 1950s, and the resulting lower coffee prices, prompted Luis Vara and the study area's coffee producers to retain an increased portion of the sale price of processed coffee. The establishment of the International Coffee Agreement (ICA), in part helped along by the Kennedy Administration's Alliance For Progress program, boosted prices by the early 1960s. Coffee was viewed then as a favorable land use option in Hojancha's highlands. Production expanded accordingly, and coffee was an underlying factor in Hojancha's regional restructuring in the early 1960s. In short, regional reconfiguration by the early 1960s was created by a conjunction of social class processes, local ecological factors, and national and international market conditions with respect to cattle, basic grains and coffee. These national and international aspects of political economy are the subject of Chapter Five.
By the mid-1970s, a number of conditions had coalesced to pave the way for further regional restructuring in Hojancha. Declining terms of trade in basic grains had forced smallholders to reduce fallow periods in the 1960s and 1970s. Declining terms of trade in cattle led to further deforestation and extension of grazing onto fragile lands. Emigration of landless and unemployed Hojanchans occurred at a remarkably high rate, capturing the attention of officials in San José. Local community leaders, led by Luis Vara, succeeded in their efforts to lobby the state for the resources to establish the cantonal agricultural center, CACH, in 1976. This has led to the establishment, within little more than a decade, of a forestry-based economy in the study area, despite some reservations by Vara and others about emphasizing the activity so strongly. The growing interest in reforestation on the part of the state, as expressed in a series of subsidies and environmental laws enacted since the latter 1960s, played a major role in the course of Hojanchan development from 1976 on.

The development of forestry activities of Hojancha, the topic of Chapter Six, is an example of local agency in action. In particular, forestry underlies the formation of the region around a political cause. Once state subsidies for reforestation became cash payments instead of simply tax deductions, Hojanchan smallholders were able to take
advantage of them. Hojancha quickly became a focal point of this activity on a national scale, capturing the attention of ecologically-based research organizations of Costa Rica and a number of countries of Europe, plus Canada and The United States. Indeed, four-wheel-drive vehicles bearing the emblems of such organizations arrive in Hojancha almost daily, transporting researchers and students throughout the study region to examine tree plantations and seedling nurseries.

The region in 1994 is most likely in the beginning stages of another restructuring. While smallholder demands on community leaders have been partly responsible for the development of forestry in the canton, the economic successes that many of them began to enjoy appear to be less than sustainable. Many smallholders have been successful at devoting small portions of their land to seedling nurseries. Likewise, local community leaders with a stake in the success of forestry have assisted several non-landowning laborers in establishing small nurseries on rented land and in marketing their seedlings. But, saturation of seedling markets, due to a number of factors, has caused economic hardship for many campesino families since 1990.

Market saturation is the result of structural factors. Hojanchan small-scale viveristas face intense competition with larger-scale viveristas in the region, with small- and
large-scale viveristas who recently have established nurseries in other regions of Costa Rica, and with the major reforesters themselves. The latter include large paper and pulp companies that have recently begun to produce their own seedlings instead of purchasing them from Hojanchan nurseries. Despite incentives, reforestation does not occur rapidly enough throughout Costa Rica to absorb the country's seedling production each year. Meanwhile, Hojancha's largest seedling producers, who largely control the flow of market information, and consequently control the marketing of nearly all the canton's seedling production, are still able to establish contracts with reforesters, thus guaranteeing a market for their own output. For smallholders to persist, new measures must be sought by these agents to cope with the changing structures.

The Hojancha case study and its regional transformations in the twentieth century illustrate how processes occurring in the realm of political economy are dependent upon local context. For example, Marxian-related analyses on the question of smallholder persistence differ from Chayanovian-related analyses, as discussed in Chapter Two. Some Hojanchan smallholders prosper, some lose out, and some persist at roughly the same standard of living. Still others prosper, then lose out, and so forth. Likewise, the Marxian emphasis on productive relations, or
internal class dynamics, contrasts with Wallerstein's (1976) World System emphasis on exchange relations. In truth, both have relevance in the local context, and neither is universally applicable. Hojanchan elites often prosper at the expense of the misfortunes of their neighbors. No malice is intended; it is simply the result of Hojancha's unique version of agrarian capitalism. At the same time, Hojancha's fortunes are tied to its linkages to other regions of the national, and by extension, international economies. It is this concept of local contextuality that lies at the heart of critical chorology.

**Regional Restructuring in the Mid-1990s:**

**The Demise of "Hojanchan Exceptionalism"?**

The timing of Hojancha's entry into forestry has enabled the region in large part to take on the character of a place situated within the semi-periphery of the World System. By organizing early on to receive and distribute funds from the state and international development organizations, and to receive attention from ecologically-based research organizations, the recent frontier settlement zone now wields considerable influence in the realm of small farm forestry in northern and northwestern Costa Rica. Many communities of Guanacaste, the northern plains, and other recent frontier settlement regions that now participate in reforestation, rely on Hojancha's nurseries for their seedlings. The canton maintains its
reputation as a leading forestry stronghold in the country: officials in San José of the Ministry of Natural Resources and Mines, for example, are well acquainted with CACH officials and with Hojancha's most prominent viveristas and the quality of their product. The current director of AGUADEFOR, the Guanacastecan Association of Forestry Development, located in the city of Nicoya, is a former director of CACH and a native Hojanchan.

The locality's rise to the semi-periphery is not limited to forestry-based activities. As explained in Chapter Seven, the variable Hojanchan landscape of mountains, high plains, and the lower plain of Matambú, is matched by equal diversity in land use practices and labor-related decision making. For example, Guanacastecan coffee producers' recent good fortune, the agreement established with the Dutch-based Max Havelaar Foundation that will provide the region a higher price for its coffee than the standard Costa Rican export price, is the result of efforts by a native Hojanchan, the Director of Coope-Pilangosta. He is simultaneously the director of UNACOOP, a Union of eight coffee cooperatives of northwestern Costa Rica that are part of the Max Havelaar agreement.

In late 1993, construction began adjacent to the CACH office of a honey processing, bottling and marketing center. The project, funded by the IDB, will be the primary outlet for beekeepers of Guanacaste. It is hoped
by CACH that an agreement will be reached with the Max Havelaar Foundation for marketing the honey in Europe. The office that administers housing subsidies for the majority of the Nicoya Peninsula is located in Hojancha because of the connections between Luis Vara and the PLN Administration of Oscar Arias, which started the nationwide program in the late 1980s.

Although Hojancha is a regional core for these activities, several conditions exist which bring into question the region’s ability to maintain well into the future its place in the semi-periphery. Flaws in seedling markets, particularly those related to saturation, and to the lack of coordination in the timing of the planting of seeds in nurseries and the application for forestry incentives, have generated significant risk in seedling production as a smallholder persistence strategy.

As discussed in Chapter Two, markets are usually not the central focus of political economic approaches to Third World rural development studies. Internal class structures of peasant communities, peasant household consumption behaviors, or household persistence strategies tend to be emphasized in these studies. This case study, however, illustrates the importance of markets to class formation and smallholder persistence. Those Hojanchan viveristas who dominate the marketing of the canton’s seedlings have seen their social positions enhanced. Within a decade, the
largest seedling producers have been able to hire the most labor, and therefore, generate sufficient capital to expand production each year. Small-scale seedling producers who have experienced considerably less success with seedling markets, have suffered economic hardship and even debt. Their lack of capital, their inability to expand production, and stagnant seedling prices have translated to a combination of declining terms of trade, proletarianization, and in some cases, landlessness, for small-scale viveristas. Large-scale producers, on the other hand, are insulated from these effects. Thus, Hojancha’s contemporary regional restructuring involves "locals manipulating locals" as much as it involves competition with other regions.

Seedling markets do not represent the only forestry-related problem. As officials of CACH, DGF, and CEMPRODECA point out, it is unlikely the IDB-backed reforestation subsidies will continue. Based on the responses of reforesters in Hojancha interviewed as part of this study, the incentive payments have been crucial to smallholders’ decisions to reforest. A majority of Hojanchan reforesters indicated they were reluctant to devote one to three hectares of land to reforestation, but did so primarily for the incentive payments. Several expressed their concern that by choosing reforestation, they forfeited the ability
to raise cattle or food crops on the land, which could have provided the household additional food or income each year.

**Hojancha’s Likely Future Course**

Assuming the IDB-backed subsidies end, which is likely, reforestation will be an activity of predominately medium-sized and larger farms, whose owners view it as a long-term investment. Such farm operators will obviously not have the same short-term cash flow requirements as many who now participate in the incentive programs. Retired farmers whose children leave the community for college or urban jobs will find reforestation, which has low labor requirements, an attractive supplement to small-scale cattle production. Already, a small number of Hojanchans with insufficient family labor have pulled their coffee trees out of the ground, replacing them with pasture or planted hardwood trees.

Eventually, the results of today’s reforestation in Hojancha will materialize, and the wood will be sold. Most likely, demand and prices for the wood of all species produced in Hojancha will be favorable. Rain forests will become a less important source of hardwoods, and tree plantations will prove to be economically feasible for those producers with sufficient land and capital. This expected success will translate to a sustained interest in reforestation, especially among operators of medium and
large farms. Smallholders will most likely produce edible products instead, such as basic grains and cattle.

This likely pattern will be reinforced by the growing consciousness of reforestation on the part of Costa Ricans. Ecotourism and agroecotourism are, and will continue to be, the basis for the increase in foreign visitors to Costa Rica. As such, these are economic sectors of great interest to the state and multinational lending institutions. This will reinforce Hojanchans' efforts to promote agroecotourism in the canton through its cantonal Chamber of Tourism, which in turn will serve to sustain interest in reforestation in the community. Already, several Hojanchans banking on such a future have plans for opening more restaurants and lodging facilities. CACH may very well be successful in obtaining alternative sources of financing for reforestation, given the potential of agroecotourism. This most likely will not be in the form of incentive payments, which smallholders would need for participation in the activity. It is worth noting that Hojancha already has played an important role in shaping the national consciousness with respect to reforestation. The community is becoming better known throughout Costa Rica. The phenomenon exemplifies local agency affecting national structure. CACH and Coope-Pilangosta will most likely become deeply involved in the marketing of agroecotourism in the canton.
Saturation of seedling markets will serve in the short run to reduce the number of new, start-up nurseries as well as existing small-scale nurseries. Smallholders and laborers who in recent years have looked to seedlings as a mechanism for achieving upward social mobility, will mostly rely once again on basic grains as a household subsistence strategy. Most likely, aspirations for upward mobility will be replaced by, quite simply, the desire to persist. Bee keeping and honey production may prove to be viable alternative cash-generating activities for smallholders. This depends upon the ability of CACH to promote forward and backward linkages, including marketing honey throughout Costa Rica and beyond, and the ability for smallholders to gain more of a collective voice in matters of CACH credit policies.

If reforestation were to no longer be widely practiced in Hojancha, the region would stand to lose much of its clout in San José. Forestry is, after all, responsible for much of the attention the region receives from officials of the state and international development organizations with regional headquarters in San José. Similarly, the current social class and political structures of Hojancha are maintained largely because they are legitimized in the minds of most Hojanchans, by virtue of the successes power brokers have brought to the community in the realm of forestry. With faltering seedling markets and the
disappearance of reforestation subsidies, however, the current Hojanchan elite will face a new crisis of legitimation.

Future Hojanchan regional restructuring, before and after the turn of the twenty-first century, will be the expression-in-place of a coalescing of forces that involve the physical environment, the social structure of the community, the Costa Rican domestic economy, the World System, and the personalities and biographies of Hojanchans. As in the past, Hojanchans' efforts to achieve an improved way of life will not be free to operate in isolation from global processes. Economic "downsizing" in the industrial world, the proliferation of global "free" trade agreements, the increasing spatial mobility of capital throughout the world, and global austerity measures are among the large-scale processes whose unpredictable outcomes will surely condition the social context within which future Hojanchan regional identity unfolds.

If forestry is to have a future as a smallholder persistence activity, the demand for wood products, a condition beyond the control of Hojanchan agents, will have to improve and be maintained. Rolanda Araya, the former Municipal Executive of San José and former Minister of Public Works, and social democratic political philosopher, has maintained that contemporary Costa Rican exceptionalism cannot be sustained if the country continues to rely on
exporting basic agricultural goods that continually suffer declining terms of trade (Araya 1987: 150-157). Similarly, Hojancha's relative prosperity, to be maintained, depends in large part on the development of forward linkages to its forestry sector, which itself would be uncomfortably dependent upon distant political and economic forces beyond the direct control of the community. The locality's fate rests in part in the hands of its people, and in part in the hands of the global village, of which it is irreversibly a part.
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Zimmerer, Carl S.
APPENDIX I
DESCRIPTION OF THE SAMPLING TECHNIQUE
USED FOR SELECTING INTERVIEWS

Two conditions make necessary the use of representative samples in social scientific fieldwork: the use of quantification and the impossibility of interviewing every member of the study's population (Pelto and Pelto 1978: 127-140). Because a limited amount of quantification is employed in this study, I found it necessary to select a sample to represent as closely as possible the overall population of agricultural households in the Hojancha study area. This was a challenging task. According to Pelto and Pelto (1978: 130), "(e)ven in relatively small communities it is sometimes difficult to obtain a total enumeration of families or households from which to draw a random sample."

No list exists of all agricultural households in the Hojancha study area from which to conveniently draw a sample. Likewise, no up-to-date areal photographs exist from which to derive a strict random sample.

To obtain a close approximation of a strict random sample, a sampling methodology was derived, utilizing components of quota sampling and stratified random sampling, as elaborated by Pelto and Pelto (1978: 127-140). A stratified sample is one that takes into account the different subgroups of a research population, such as social classes, ethnic groups, and in this case, altitudinal subzones and producer categories. Quota
sampling is a not-strictly random type of stratified sample that involves the selection of a sample through the use of quotas to match the research population in its diversity of subgroups.

Given the diversity of subzones in the study region, including highland (coffee-producing) villages, the Hojancha Meseta and Matambú, a stratified sampling technique was necessary to ensure that each producer category (laborer households and small-, medium- and large-farm households) were adequately represented in each of the subzones. However, the possibility of obtaining a strictly random sample, accurately representing these subcategories in the same proportions as the overall population, is further reduced by the fact that many Hojanchan farm units are fragmented, and located in one or more subzones and some distance from the household.

The sample included 119 agriculturalists, consisting of 88 farm operators and 31 laborers. This represents approximately 14 percent of the study area’s total households, and 18.5 percent of its agricultural households, according to a household count conducted in 1992 by officials of the Social Security Clinic of Hojancha. The sample can be broken down by zone and producer type as indicated in Table A-1. Officials of CACH were consulted regarding the validity of this sample. They
agreed that this is an accurate breakdown of the agricultural population of the study region.

TABLE A-1
NUMBERS OF INTERVIEWS BY SUBZONE AND PRODUCER TYPE

<table>
<thead>
<tr>
<th>Zone</th>
<th># Small Farm Units</th>
<th># Medium Farm Units</th>
<th># Large Farm Units</th>
<th># Laborer Farm Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hojancha Plain (incl. Pilangosta)</td>
<td>29</td>
<td>7</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>Matambú</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Highlands (incl. Monte Romo, Pita Riyada, Huacas, Maravilla, etc.)</td>
<td>21</td>
<td>14</td>
<td>4</td>
<td>13</td>
</tr>
</tbody>
</table>

Within each village or subzone, households were selected along main roads and along secondary side roads in proportions roughly equal to the actual proportions for all households. Furthermore, to achieve the sample roughly duplicating the actual proportions of laborers and small, medium and large farms in each subzone (as estimated by CACH officials), a quota sampling technique was used toward the end of the interviewing process. In the case of deficiencies (for example, medium-sized producers in the highland subzone,) a search was carried out to round up the desired number, so that the sample matched the proportional estimates of CACH. This sometimes involved interviewing a
head of household living in one subzone, but whose farm was located in another subzone.

In those situations, such as this study, where complex statistical operations are not necessary, a sampling technique based on, but not strictly, a random technique provides a valid, useful representation (Pelto and Pelto 1987: 127-140). In the case of this study, general land use and labor trends were to be identified, as opposed to detailed and complex agronomic or agricultural economic statistical analyses.
APPENDIX II
GLOSSARY OF PERTINENT SPANISH TERMS

Beneficio. Coffee processing plant where the beans are husked and roasted.

Cajuela. Unit of measure equalling 20 liters.

Campesino. Peasant; small-scale landowner.

Charral. Scrubland; fallow land with weeds, brush and young tree saplings approaching 2 meters in height.

Comerciante. Middleman, businessman.

Empacador. Beef slaughter and packing house.

Encomienda. A system of land tenure in which the Spanish Crown granted explorers or other military leaders rights over Indians of an assigned territory in the Spanish colonies.

Hacienda. Large estates in Latin America characterized by feudal or quasi-feudal social relations in which the landowner presides over peons. The latter receive minor benefits, such as the use of a small piece of land for subsistence crop production, but do not ultimately control the surplus produced on the estates nor the land on which they work.

Jornal. A unit of measure of labor equal to one worker-day; one work day.

Mestizo. Racially-mixed, White and Indian.

Minifundia. Tiny agricultural landholding, usually too small to sustain a family’s livelihood without their reliance on wages earned off farm.

Minifundista. Campesino owner/occupier of a minifundia.

Minifundización. Process of division of landholdings into minifundias, usually by inheritance, or by selling off of part during economic hard times.

Peón. Agricultural laborer or tenant on a hacienda; Expression commonly used to refer to a hired agricultural laborer.

Pulpería. General store.
Recibidora. Coffee collection station, usually a small shack, located in most villages, where coffee cooperative or company receives unprocessed coffee beans from farmers.

Tacotal. Scrubland; land fallow at least three years, with tall weeds, brush and young trees.

Tierras baldios, tierras libras. Unoccupied or unclaimed lands available for colonization.

Viverista. Nursery (tree seedling farm) operator.

Vivero. Nursery; tree seedling farm.
APPENDIX III

PHOTOGRAPHS OF THE STUDY REGION

1. Town of Hojancha

2. Denuded, sloped landscape near Pita Rayada
3. Campesino family and their home, Huacas

4. An example of subsidized housing, San Gerardo
5. Woodshop where furniture is manufactured, Hojancha

6. Recently planted pochote seedlings, Libertad
7. Peón (laborer) harvesting pochote seedlings, San Gerardo

8. Melina, two years old, in need of weeding, Hojancha
9. Teak, two years old, Hojancha

10. Harvested pochote seedlings, Hojancha
VITA

Michael Stephen Yoder was born July 17, 1959 in Marietta, Georgia. He graduated from The University of Houston in 1981 with a BBA in Marketing, and spent the subsequent five years employed in a variety of finance positions with private companies in Phoenix and Seattle, and a position with a credit union in Austin. In 1987, Yoder entered the masters program in geography, with a Graduate School Fellowship, at The University of South Carolina. He completed the MA in 1989. His thesis is titled "Land Use Patterns in the Southern Piedmont Livestock Region: A Case Study of Saluda County, South Carolina."

Yoder entered the doctoral program in geography at Louisiana State University in 1989, with a four-year Alumni Association Fellowship. At L.S.U., he studied the agriculture of Latin America, as well as theories of geographically uneven development. He spent more than a year in Costa Rica conducting field research and attending a field course, presented by The Organization for Tropical Studies (OTS), in tropical managed ecosystems. OTS provided funding for the dissertation fieldwork. During the 1991-92 academic year, Yoder taught geography courses full time at Louisiana Tech University in Ruston. As of this writing, Yoder is employed as a temporary instructor.
of geography at Francis Marion University in Florence, South Carolina. He is married to Julie B. Yoder.

Among Yoder's published works are "The Latin American Plantation Economy and the World Economy: The Case of the Yucatecan Henequen Industry" (Review, 16(3), Summer 1993); "The Discovery of Alternative Smallholder Persistence Strategies in Central America: The Costa Rican Campesino and Non-Traditional Crops" (SECOLAS Annals 24, 1993); and co-authored with Kent Mathewson, "Aboriginal and Peasant Cultures: Central America and Yucatan" (Geographic Research on Latin America: Benchmark, 1990, CLAG Publications, 1992).
DOCTORAL EXAMINATION AND DISSERTATION REPORT

Candidate: Michael Stephen Yoder

Major Field: Geography

Title of Dissertation: Critical Chorology and Peasant Production: Small Farm Forestry in Hojancha, Guanacaste, Costa Rica

Approved:

[Signatures]

Major Professor and Chairman

Dean of the Graduate School

EXAMINING COMMITTEE:

[Signatures]

Date of Examination:

October 6, 1994