**Development, Transnational Power, and Environmental Degradation:**

**A Case Study of the Costa Rican Banana Industry**

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## ABSTRACT

This dissertation undertakes a comprehensive analysis of the Costa Rican banana industry, including a case study based on fieldwork at an independent banana plantation in Costa Rica's Atlantic zone. A basic premise is that a coherent understanding of the banana industry and its consequences can only be achieved through the appreciation of the complexity of its organization. That is, the Costa Rican banana industry is a political-economic, socio-cultural, and environmental system articulated through a high degree of interaction at the micro and macro levels. Modernization and world systems theories are shown to provide partial and insufficient accounts of the dynamics at work in the Costa Rican banana industry. An embedded model of world systems theory, which includes aspects of sustainable development, is proposed to address these concerns. The analysis at various levels is intended to support the argument that consideration of environmental dynamics must be addressed in future theoretical accounts of development.

Following world systems theory, the strong role of the banana transnationals within the industry and in relation to national development is examined. Other links between the Costa Rican banana industry and the broader international political economy are also examined, including the 'banana wars', as well as environmental issues, such as DBCP and other agrochemical usage. Significant changes in the Costa Rican banana industry since the 1980's are considered. These include: 1) a sharp increase in banana production, and an increase in independent banana

producers; 2) the dissolution of the banana unions, and their replacement with a new system of labour relations (solidarismo); and 3) the recent concern for issues of environmental destruction. These changes, combined with the centrality of the banana industry to Costa Rican development, have resulted in significant consequences at the micro level. These are manifested in the organization of banana production and in operations on the plantation, as seen with respect to working conditions, quality control and of transnational power. In addition, environmental degradation, and underdevelopment and marginalization beyond the plantation are examined as direct consequences of the Costa Rican banana industry. This is supported with extensive ethnographic detail.

## RÉSUMÉ

Cette dissertation entreprend une analyse compréhensive de l'industrie de la banane au Costa Rica et comprend l'étude du cas des travaux de recherche exercés sur une plantation indépendante de la zone atlantique costaricaine. Comme point de départ, on suppose qu'une compréhension cohérente de l'industrie de la banane et de ses conséquences ne peut s'actualiser qu'à partir dúne évaluation de la complexité de l'organisation de cette industrie. C'ést-à-dire que la banane implique les systêmes politico-économique, socio-culturel et environnemental, articulés dans une interaction complèxe sur des niveaux micro et macro. Les théories de la modernisation et du 'système-monde' (world systems theory) ne peuvent éclairer qu'en partie la dynamique de cette industrie, selon l'auteure. Des principes à la base de la théorie du 'système-monde' qui comprend des aspects du developpement soutenable sont donc proposés pour combler ces lacunes. Une analyse à plusieurs niveaux sert à appuyer la thèse que l'on doit adresser l'aspect environnemental dans des études futures sur le developpement.

Suivant la théorie du 'système-monde', on examine le rôle important des compagnies multinationales dans l'industrie de la banane et leur influence au niveau du développement national. On analyse aussi les liens entre cette industrie et l'économie politique internationale y compris 'la guerre de la banane' et des questions environnementales telles que le 'DBCP' et l'emploi d'autres produits agro-chimiques. On examine les changements importants dans cette industrie

costaricaine depuis les années 1980. Ceci comprend: 1) l'augmentation considérable dans la production des bananes et le nombre des producteurs indépendants; 2) la dissolution des syndicats et la création d'un nouveau systême 'solidarismo'; et 3) la préoccupation récente de destruction environnementale. Ces changements en combinaison avec le fait que l'industrie de la banane se trouve au centre du développement costaricain ont des conséquences majeures au niveau micro. Les changements se manifestent aux niveaux de l'organisation de la production et de la gestion sur les plantations, en ce qui concerne les conditions du travail, le contrôle de la qualité, et le pouvoir des compagnies multinationales. On analyse également la dégradation environnementale et le sous-développement et la marginalisation en dehors de la plantation comme étant des conséquences directes de l'industrie de la banane au Costa Rica. Cette analyse est appuyée par des détails ethnographiques.

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## DEDICATION

This dissertation is dedicated to the banana workers of Costa Rica, and to Roberto Castillo, and the many other individuals who, despite hardship, have continued to maintain the spirit, and to contribute to the project of social change within the banana industry.

Our Father, who art in every plantation worker, Hallowed be Thy great struggle, thy will be done and not that of the Capitalists. Thy Kingdom come to all of us, that we may manifest it in solidarity and fraternity; but above all, in the struggle to liberate ourselves from the oppression to which we are all subject here on Earth.
Give us this day our daily bread, and those who have none let them receive it through us. Forgive us our lack of: Organization, Solidarity and Courage to defend our brothers and sisters. Lead us not into temptation of imitating those who practice injustice, but deliver us from the claws of Neoliberalism. Amen.
(Roy H. May, Foro Emaús)

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## Chapter 1: Introduction

### 1. Introduction and Problem Statement

The banana industry has been prominent in the development of Costa Rica for just over a century. The export of bananas and coffee has long been the basis for the Costa Rican economy, joined by tourism in the 1990s. It was in Costa Rica where the well-known transnational, the United Fruit Company (UFCO) was founded and first flourished, and it was because of the operations of the UFCO that Costa Rica became the original 'banana republic'. Thus the operation of transnationals in the banana industry and relative to Costa Rican development has been an issue since the beginning of the banana industry. Although of primary significance to the Costa Rican development, the significance of the UFCO model of production and of the problematic of the banana republic stretch well beyond the borders of this small Central American country.

Since the 1980s, there have been some important changes in the Costa Rican banana industry. These include: 1) a sharp increase in banana production, and an increase in the number of independent national banana producers; 2) the dissolution of the banana unions, and their replacement with a new system of labour relations (solidarismo); and 3) the recent concern for issues of environmental destruction. These are strongly related to events and dynamics at the macro international level. In addition, at the micro level these events and the dynamics of

the banana industry reveal environmental, socio-cultural and political-economic consequences.

Despite its importance to Costa Rica, and relevance to issues of global development, to date there has been no broad-based examination of the banana industry in Costa Rica. Several studies have provided excellent analyses of specific aspects of the banana industry in Costa Rica, such as Bourgois on ethnicity (1989, 1994) and López on economic aspects (1988). Yet neither provides an overall analysis for the industry because of a failure to address the interactive issues associated with environmental, socio-cultural and political-economic aspects at both the micro and macro levels. The recent changes in the Costa Rican banana industry, the importance of the industry to Costa Rican development, and the prominent role of the transnationals in these, together signal the importance of evaluating the industry and assessing its impacts on Costa Rica's development.

Both world systems theory and modernization theory share the objective of explaining the broad-reaching issues associated with development. However, the recent concern for issues of environmental destruction, as well as a move towards a 'greening' of the banana industry both require the use of theoretical tools sensitive to environmental issues. In this respect, sustainable development brings important insights in addressing the Costa Rican banana industry that are inaccessible within the conventional boundaries of the traditional development theories.

## 2. Research Objectives

A basic premise for this study is that the Costa Rican banana industry is a political-economic, socio-cultural, and environmental system that is articulated both at the micro and macro levels of analysis, such that there is a high degree of interaction among these. Therefore, a coherent understanding of the banana industry and of its consequences can only be achieved through the appreciation of the complexity of its organization.

As such, the three basic objectives of this study are to:

1) document and analyze recent changes in the Costa Rican banana industry, and of the relevant events and dynamics of the broader political-economic context.

2) examine the complex organization of the industry by focusing on the interactions between the micro and macro levels of analysis, and among the socio-cultural, environmental, and political economic aspects of the banana industry.

3) examine the socio-cultural, environmental, and political economic consequences of the banana industry on the micro level, both for the banana industry, and for Costa Rica.

In addressing these objectives, this dissertation also aims to provide the following two contributions to the sociological approach to international development: 1) contemporary ethnographic data on banana production and workers in a Costa Rican plantation and the region in which it is located; and 2) support for the growing emphasis on ecological considerations into theories of development.

The study is based on fieldwork in Costa Rica in from December 1995 to August 1996. A significant component of the fieldwork was a case study at finca Calarcá, an independent banana plantation near Limón, in Costa Rica's Atlantic zone. It also included 1) fieldwork on other plantations; 2) a worker survey; 3) archival research; and 4) semi-structured interviews with individuals from key organizations associated with the banana industry. A description of the methodology for the study is presented in Appendix 1.

3. Significance of the Study

This study provides a grounded analysis of the banana industry and of its implications for Costa Rica's development, including its political-economy, socio-culture and ecology. The analytical framework for an understanding of this relationship is informed by the issues raised by modernization theory, world systems theory and sustainable development. By providing political-economic, socio-cultural and environmental data at both the micro and macro levels, it provides a broad-based study of banana production in Costa Rica.

In these ways, this study provides an original contribution to the understanding of banana production in Costa Rica, both for the future of banana cultivation and for Costa Rica's development potential. It has relevance for the fields of sociology, anthropology, geography and political sciences, and for various government departments and agencies.

However, the issues addressed by this study are not only of academic interest, but are of critical importance at a practical level to the sustainability of the

people and ecosystems of Costa Rica. Because this study is grounded at the micro level, it allows for specific information regarding economic, ecological and socio-cultural sustainability. In addition, the issues addressed by this study, when generalized to a global level, represent the potential to push beyond the traditional debates associated with modernization and dependency. Given the seriousness of environmental degradation, and of what is frequently presented as the 'crisis' in development, this is an important direction for sociology and for humankind.

4. Organization

The dissertation begins, in chapter 2, with an examination of contemporary theories of development appropriate for the study. The dominant theory of development, modernization theory, is briefly discussed and critiqued. The major alternative approach, world systems theory, is dealt with in a similar manner, and both of these are queried due to the absence of explicit consideration of ecological concerns. In Chapter 3, the history of the development of the Costa Rican Banana industry is traced, showing the way in which the foundations for contemporary activities and dynamics have been laid. Chapter 4 shows how many of these historical issues continue in following decades, thereby foreshadowing events in the late 1980s and 1990s. In Chapter 5, the nature of the global structure of the banana industry is portrayed through a detailed account of the expansionary efforts of Costa Rican banana producers who were anticipating a tremendous growth in their markets as the E.U. opened. This chapter examines the entire encounter, referred to as the 'banana wars', between the U.S. and other producers, detailing the roles

played by nation-states in other areas which are involved. The result is that key features of the international structure of the banana industry are identified. Chapter 6 examines some of the international aspects of several environmental issues within the banana industry. In so doing, it establishes the basis for the contention that both modernization and world systems theory require more explicit consideration of environmental factors by showing the way in which these matters are not only deeply embedded in banana production, but also how neglect detracts from their theoretical adequacy. Chapters 7-9 examine the consequences of the macro features of the banana industry on the micro level, both within the industry and within Costa Rica, more generally. Chapter 7 provides a discussion of quality control and of transnational power. It traces the way in which the structural features of the global industry are manifested in the organization of banana production in Costa Rica and in operations on the plantation, thus lending support to the structural thesis of world systems theory. Chapter 8 extends the structural impact even further into the plantation by showing how working conditions and attempts to change them are played out. These dynamics are supported in detail with ethnographic data. Chapter 9 moves beyond the plantation and its operations back into the broader context of banana production. Environmental degradation, and underdevelopment and marginalization are examined as direct consequences of the Costa Rican banana industry. This furthers the argument for bringing ecological considerations back to their theoretical point of origin. A summary of the major findings and conclusions is presented in chapter 10. The following material is found in the respective

appendices: 1) the methodology for the study; 2) an introduction to the physical and social organization of production at finca Calarcá; 3) an expanded explanation of banana production techniques; and 4) selected worker profiles and biographical material.

## Chapter 2: Towards an Ecologically Sensitive World Systems Theory of Development

This chapter reviews two predominant theories of development as they may be expressed in relation to the contemporary banana industry in Costa Rica: modernization and world systems theory. It takes the latter as a point of departure with the proviso that it requires modification to take into consideration the matter of environmental and ecological relations. The following sections begin with a discussion of modernization theory in relation to the Costa Rican banana industry and some of the critiques which have been leveled at this approach. This is followed by a discussion of world systems theory and the criticisms which it has faced. The third section examines a number of environmental issues which have arisen which are relevant to the Costa Rican Banana industry. That leads to my concluding section which suggests the orientation which will be employed.

### 1. Traditional Theoretical Approaches to Development

#### a) The Costa Rican Banana Industry and the Modernization Paradigm for Development

Over the past hundred years, the banana industry has played several important roles in the development of Costa Rica. These roles center around the following three areas: 1) as an employer; 2) as a source of export capital; and 3) as a creator of infrastructure. Costa Rica is the second highest exporter of bananas in the world. It has approximately 52,000 hectares in production with 35,000 workers employed directly, and approximately 80,000 workers employed indirectly

(CORBANA, 1995). In 1995, Costa Rica exported just over 112 million boxes, or 2 million metric tonnes of bananas, which is worth approximately $650 million US. The export taxes generated about $44 million US which, after tourism, is the highest source of foreign capital (CORBANA, 1995; EIU, 1996).

One traditional role of banana companies in Costa Rica, especially the transnationals, has been the creation of infrastructure, including the railway, roads, electrical lines, telephones, and the construction of schools and medical clinics. This has played a strong role in the development patterns in Costa Rica. This infrastructural role of the banana industry has its roots in the legacy of the United Fruit Company, which was founded in 1899, based on the export of bananas grown on land adjacent to the Costa Rican railroad (Acuña Ortega, 1991; Murillo Chaverri, 1995; CORBANA, 1995; Ministerio de Comercio Exterior).

Costa Rica has followed a programme of development consistent with the modernization theoretical paradigm for development. This paradigm is the dominant approach to development, both for industrialized and underdeveloped countries. The modernization paradigm is oriented towards the re-creation of the factors central to the industrialization processes in nation-states that have already developed. Thus, the industrial revolutions in Britain and Europe serve as a principal reference point of modern history.

Following the modernization paradigm, economic growth is the primary means for achieving economic development and therefore great emphasis is placed on attaining economic growth. Following the modernization paradigm for

development, economic growth is to be achieved, in part, by increasing economies of scale, industrialization, and efficiency. Some of the primary strategies to achieve these goals are by increasing the use of machinery, technology, and scientific-based methods of production. In this respect, transnational corporations play an important role because of their ability to mobilize capital and to achieve economies of scale using high degrees of technology and industrialization. The modernization paradigm also calls for increased infrastructure creation, political-cultural modernization, and participation in the global market, all of which help jump-start the economy and lead to economic development (e.g. Bendix, 1967; Eisenstadt, 1966; Moore, 1966; Rostow, 1960; Weiner, 1966).

Costa Rica has followed the modernization paradigm of development with respect to the banana industry. The banana industry relies heavily on scientific-based production techniques designed to increase efficiency and profitability. Two examples are the use of genetically engineered strains of bananas and the degree of chemical usage within the industry. Following the emphasis on export-led development and participation in the global economy, the Costa Rican banana industry is oriented exclusively towards the export sector.

As mentioned above, the banana transnationals, such as Chiquita Brands International (formerly the United Fruit Company), Standard Fruit (Dole brand), and the Banana Development Company (del Monte brand) have played an important role in the banana industry and in Costa Rica, especially with respect to infrastructure creation. The prominence of the transnationals in the banana industry

and relative to Costa Rican development patterns has not diminished. In 1995, just under 75% of the boxes for export were marketed by the following transnational corporations: Chiquita Brands International, Standard Fruit (Dole brand), and the Banana Development Co. (del Monte brand).

The banana industry has thus made important structural and infrastructural contributions to Costa Rica's development, by creating economies of scale, as well as demands for other business ventures, through backward and forward linkages. It has also been a major source of foreign investment and economic growth. Following the modernization paradigm for development, Costa Rica's increases in productivity due to agricultural modernization have been spectacular and unmatched anywhere else in Central America since 1950. This has afforded Costa Rica a relatively high standard of living (Hall, 1985; World Bank, 1994). Therefore, the banana industry, over its long history, has played an important role in the political-economic structure and economic development of Costa Rica.

b) World Systems Critiques of the Modernization Paradigm of Development

The modernization paradigm for development has been critiqued extensively, particularly from neo-Marxist perspectives, such as dependency and world systems theories. Dependency theory emerged in response to the inadequacies of modernization theory in explaining the development and underdevelopment of Latin American countries. Dependency theory, in turn, was the basis for world systems theory. In the following section I will discuss some of the dependency and world systems theory (hereafter labeled world systems theory)

critiques of the modernization paradigm which have theoretical bearing on the design of the present study.

By employing the regional or world system as the unit of analysis the world systems analyses reveal structural bases for development, underdevelopment and power. Specifically, the development process of First-World countries (or core) is the direct cause of the underdevelopment of Third-World countries (or periphery). This exploitative process is one in which underdeveloped Third-World countries have been made to be dependent on the developed First-World countries. World systems theorists have argued that these exploitative relations between the core and periphery are articulated at local, national and regional levels, and these power relations in turn are the basis for the world system (Amin, 1974; Baran, 1957; Baran & Sweezy, 1966; Cardoso & Faletto, 1979; Chase-Dunn, 1989; Frank, 1969, 1971; Furtado, 1964, 1971; Prebisch in Meier & Seers, 1984; Prebisch, 1964; Sunkel & Paz, 1979; Wallerstein, 1974, 1979).

Following world systems theory, the modernization paradigm, which is purported to increase economic development for third-world countries, in fact reinforces and increases dependency relations, and benefits empowered first world companies and countries. Although the modernization paradigm of development may lead to economic development in Third-World countries, these development patterns are distorted, uneven and exploitative. This system of exploitation between the core and the periphery is defined in a number of ways. Imperialism, market capitalism, and development based on the modernization paradigm are common

expressions of these power relations. In contrast to the modernization paradigm, links with First World countries, including participation in the global economy through exports, contribute to dependency relations and to the underdevelopment of third world countries. This is because market capitalism is a system structured to benefit industrialized countries.

Following the modernization paradigm, economic growth occurs with an increase in foreign control, particularly with transnational corporations, which often operate in monopolistic or oligopolistic conditions. This results in the suppression of locally-driven development initiatives, because domestic companies interested in long-term and local investment are typically unable to compete with larger and foreign-owned businesses. The strategy of increasing efficiency by decreasing labour costs and by optimizing the labour market results in increased unemployment, underemployment and worker exploitation. Internal and external migration lead to the displacement of labour, and the weakening of local institutions and development initiatives. This increases the vulnerability to foreign influences.

Most Third World countries do not have local access to technological and chemical inputs, making them dependent on foreign sources for their supply and service. This is a costly process which increases dependency, the polarization between the wealthy and poor, and debt. In addition, scientific knowledge and technology are not value-neutral, but are products of empowered human systems, and thus reflect the biases and values of the system in which they were designed to operate. In this way, the widespread transfer of scientific knowledge and

technology from the First World to the Third World reinforces the power of the empowered First World and Third World élites. In addition, the modernization paradigm's over-emphasis of the economic knowledge system marginalizes other knowledge systems, variables and practices. This is structurally reinforced by the institutions involved in development discourse, and by those who benefit from this exploitation (Bodely, 1988, 1990; Burger, 1990; Conway & Barbier, 1990; Gill & Law, 1988; Marchak, 1991; Mies, 1986; Berthoud in Sachs, 1992; Esteva in Sachs, 1992; Shiva, 1989, 1991; Taussig, 1980).

Thus, it can be seen that from a world systems perspective, the development strategies of the modernization paradigm contribute to the exploitation of peripheral countries and peoples, and to the maintenance of dependency relations.

c) A World Systems Approach to the Costa Rican Banana Industry

These world systems critiques of the modernization paradigm are useful for contextualizing and assessing the validity of the modernization paradigm with respect to the Costa Rican banana industry. Thus, although the banana industry has been instrumental, for example, in terms of economic growth, employment and infrastructure creation, it has also contributed to distorted and uneven development patterns in Costa Rica, to its high foreign debt, as well as its recent status as a net food importer (Edelman & Kenen, 1989). Within a context of dependent development, environmental destruction, migration, and the use of technological and chemical inputs in the banana industry can be seen to benefit those in power at

the expense of those who are more marginalized, such as banana workers and Costa Rican's who live in close proximity to banana plantations.

Banana plantations have a high, but fluctuating demand for labour, thus affecting internal and external migration patterns (Bourgois 1989; Purcell 1993). The banana industry is one of the most important causes for internal and external migration. Worker turnover is extremely high, thus contributing to the commoditization of labour and to the weakening of local institutions and of locally-driven development initiatives. It has also made it difficult for to establish and maintain patterns for local responsibility for ecosystem maintenance.

The dominance of the transnationals in virtually every aspect of the industry has played a significant role in not only within the banana industry, but in matters of national and local development. In this way, the banana transnationals influence the core/periphery relations within Costa Rica, as well as between Costa Rica and First World countries. The predominance of the transnationals and the orientation toward global market pressures contributes to the strong international logic associated with banana production in Costa Rica (Enloe, 1990).

This in turn contributes to their vulnerability to foreign influences, and the cycle of underdevelopment and dependency. This is exacerbated by the dependency relations and relative poverty in banana cultivation regions of Costa Rica. At the international level, the political-economic structures of dependency contribute to environmental destruction because of the benefits associated with a high demand for low-cost bananas in First-World countries.

d) Critiques of World Systems Theory

World systems theory has also been subjected to critique. In the following section, I will discuss the critiques that have most bearing on the present study. First, its critical emphasis on inequality and structure has left the issue of change unresolved, in that there is no consensus as to how the system of dependent development can or should be challenged. It is unclear what path should be taken by underdeveloped countries, given the degree of exploitation and powerlessness. Further, there is no consensus as to what the desired goal of development should be, or what this changed system should look like. Chase-Dunn (1989) argues for the necessity of a socialist world-system in order to address issues of empowerment, diminishment of the core/periphery hierarchy, and socio-cultural development. Both he and Wallerstein (1979:23) argue that the semi-periphery is in the best position to make advances along this front, because of its position as exploiter and as exploited. On the other hand, de Soto (1989), among others, argues for bottom-up development, and local solutions as the means for achieving development processes that are appropriate for the society.

Further, the role of industrialization is debated. Many dependency theorists argue that the industrialization process is an important means for the periphery to 'level the playing field' of participation in the international economy. Others, such as Prebisch (in Meier & Seers, 1984), have argued that participation in the market capitalism is futile for achieving a positive path to development, and that 'de-

linking' as well as the creation of trade alliances within the periphery are the most viable means for change.

Another critique of world systems theory has been that in employing structuralist analyses at the international level, world systems theory has not been sensitive to variations, for example, in internal-external relations or in the social relations of production, labour, and capital. By focusing on the international level, world systems theory fails to recognize or address the richness of dynamics and relations, especially at the micro level. A related critique is that world systems theory tends to reduce virtually any situation to power, exploitation and dependency. As a result of these critiques, the explanatory power of world systems theory has been questioned, and some theorists have moved towards alternative paradigms of development, such as participatory development, in order to better examine aspects of development at the micro level (Attwood, 1992; Petras, 1978; Nederveen Pieterse, 1998; Portes, 1997; Veltmeyer, 1997).

A final critique is that world systems theory has been insufficiently able to explain and address the breadth of issues relating to environmental destruction. This is in part because it fails to address the contribution to environmental destruction of industrialization as a primary process of development. Also, world systems theory has a tendency to reduce environmental issues to power and exploitation. Although this type of analysis has been useful for examining the ways in which natural resources are exploited through power relations, it is not sufficient in addressing the complexity at the micro level. This parallels the more general

critique of world systems theory that it fails to address the richness of experiences at the micro level. That is, the relations among ecosystems, socio-cultural and political-economic systems are more complex and variable than the world systems analysis of power articulates (Redclift, 1984; 1987; 1991; Sachs, 1992; Gill & Law, 1988; Daly & Cobb, 1989).

These critiques of world systems theory signal that caution must be taken in applying a world systems analysis to the Costa Rican banana industry.

## 2. Theoretical Considerations for a Re-Assessment of the Costa Rican Banana Industry

The theoretical discussion above raises important issues relating to an analysis of the Costa Rican banana industry. Nevertheless, there are a number of factors which underscore the necessity of a reassessment of the industry. First, bananas continue to play an important role in the Costa Rican economy and in Costa Rican development patterns. Banana production has expanded over the last two decades, and within the industry, the transnationals are still prominent.

In addition, there has been increasing discourse surrounding globalization, and to what extent it represents a significant change in the global political economy and the context of development. The issues surrounding globalization encompass three levels of analysis: the international level, which is dominated by the transnationals, the nation-state, and the local or popular level. Globalization is said to place pressures on the traditional roles of the state because of tension between international and regional forces. The state is pulled by the transnationals towards

trade liberalization in an attempt to maintain comparative advantage and economic growth. On the other hand, the state is pulled by the popular level towards addressing specific groups' perceived marginalization. For this reason, the state has been questioned in terms of its role in development. Nevertheless, the question of whether this represents a significant change in the underlying global power structure remains (Chase-Dunn, 1989; Marchak, 1991; Mies, 1986; Nandy in Sachs, 1992; Robinson, 1996; Veltmeyer & Petras, 1997).

Second, there have been a number of significant changes in the Costa Rican banana industry over the last fifteen years. There has been a dramatic increase in independent banana plantations, and a shift towards a new system of labour relations, known as solidarismo. In addition, there has been increasing concern over environmental issues relating to banana production, both in banana-importing countries and within Costa Rica. There have also been efforts towards a 'greening' of the banana industry.

To date there has been no broad-based examination of the banana industry in Costa Rica which addresses all of these issues. There have been several studies which provide excellent analyses of specific aspects of the banana industry in Costa Rica, such as Bourgois (1989, 1994) and Purcell (1993) on ethnicity, and López (1988) on economic aspects, but none provides an overall examination of the industry.

In addressing these issues, there are a number of theoretical considerations. First, the international nature of the banana industry, the importance of the

transnationals in the industry, and Costa Rica's development history and status all support the use of a world systems approach to the Costa Rican banana industry.

In addition, the recent concern for issues of environmental destruction and the concomitant shift towards a 'greening' of the banana industry both necessitate the use of theoretical tools sensitive to environmental issues. This is no straightforward task, since the theoretical debates surrounding issues of environmental destruction and sustainability continue to be hotly debated. Despite the lack of theoretical consensus, an understanding of these theoretical debates is useful for highlighting and contextualizing the important issues relevant for the analysis of the Costa Rican banana industry. In the following section, I will discuss some of the theoretical debates pertinent to the present study.

a) The Environmental Turn in Development Theory

A common approach in addressing environmental issues has been to attempt to integrate environmental analyses into traditional theories of development, such as modernization theory and world systems theory. This was done on an ad hoc basis, since the environment was largely ignored by development theories until the Club of Rome's introduction of the 'limits to growth' statement in the 1970s (e.g. Meadows, 1972). Following this, environmental analyses were incorporated into the discourses of both modernization theory and world systems theory. The most common expression is the approach taken by the *Brundtland report* (Brundtland, 1985) and *Our Common Future* (World Commission on Environment and Development, 1987).

The most salient feature of this perspective is the claim that industrialized economic growth can be maintained as the primary productive process, with only minor changes necessary to prevent environmental destruction. This does not represent any fundamental change to the modernization paradigm. Following modernization theory's emphasis on economic growth, industrialization, science and technology, the environment is perceived as 'natural resources', which are to be exploited to achieve economic growth. Environmental protection is to occur through 'resource management', with scientific knowledge and technological solutions at the forefront. There are no absolute 'limits to growth,' since prosperity can still be achieved by increasing economic growth, with the proper implementation of technological inputs (CIDA, 1987; 1991).

This approach has been widely accepted at governmental and institutional levels as the principal approach to addressing environmental degradation. It is also the perspective most commonly understood as 'sustainable development'. However, because of its emphasis on economic growth, following modernization theory, and in order to distinguish it from other approaches, I will refer to this type of approach as 'sustainable growth'.

Sustainable growth has been critiqued on a number of different fronts. Following its traditional critical role of modernization theory, Clow (1989; 1991a; 1991b) and Sachs (1992), for example, argue that the sustainable growth perspective contributes to environmental destruction because it fails to address the underlying causes of environmental destruction. In so doing, they articulate the most common

world systems' positions on environmental destruction, which are the following:

1) foreign and empowered interests exploit the environment for their benefit because they have the power to do so and they do not suffer the consequences;

2) foreign and empowered interests marginalize and undermine local development initiatives and systems which would protect the environment because it is the locals who suffer the consequences;

3) foreign and empowered interests marginalize and exploit locals such that they have no option but to degrade their environment as a basis for their survival (Gill & Law, 1988; Shiva, 1991; Mies, 1986).

As discussed above, the world systems approach to the environment has been critiqued for reducing the complexity associated with environmental destruction to issues of power. In this sense, both world systems theory and modernization theory are critiqued for their reductionism: world systems theory to power, and modernization theory to natural resources for economic growth.

There is a further assumption with both world systems theory and modernization theory that resources are divisible and controllable. This denies that natural resources have intrinsic value and are part of ecological systems, which are interdependent and can undergo permanent systemic changes. Thus, market mechanisms fail to allocate environmental goods and services effectively because the properties of ecological systems run counter to the atomistic-mechanical perspective associated with economics and production. This reductionism obscures the

distinction between sustainable and unsustainable production and processes (Clow, 1991a; Daly & Cobb, 1989; Redclift, 1984; 1987; 1991; Sachs, 1992; Shiva, 1991).

This is exacerbated by world systems' and modernization theory's failure to address the process of industrialization as the primary cause of environmental destruction. For modernization theory, industrialized development per se is not seen as problematic. For world systems theory, the issue is unresolved. For some neo-Marxists, the emancipatory function of industrialized capitalism plays an important role in attaining socialism or communism. However, because industrialized development is a primary cause of environmental degradation, its emancipatory function is called into question. Specifically, environmental destruction may precede the arrival of socialism, or may undermine the benefits attributed to this stage. Thus, one of the primary means for achieving a more socialist world system, and the environmental consequences of these means is questionable (Benton, 1989; Clow, 1989, 1991a; Fry, 1987; Schmidt, 1971). Thus, neither modernization theory nor world systems theory unequivocally question the primary role of industrialization in development by under-emphasizing or neglecting the possibility of absolute natural constraints on the drive for industrialization and economic growth (Caldicott, 1992; Clow, 1991a; Hecht & Cockburn, 1990; Redclift, 1984, 1987; Vandermeer & Perfecto, 1995).

As a result of the perceived failure of traditional theories of development in addressing issues relating to environmental destruction, numerous attempts have been made to develop a more coherent theory of sustainable development. These

attempts have in common the position that sustainable development must be conceived of as a theoretical framework independent of either modernization or world systems theory. This is because to concede that sustainable development is merely an issue or a goal is to concede that it can be incorporated into, or reduced to other theoretical models of development, such as world systems theory or modernization theory. However, the systemic relations of the environment do not fit the reductionist assumptions of either. That is, the environment can not be effectively reduced to 'natural resources' that are subject to either the forces of supply/demand or to the exploitation of power relations. Both of these are important, but not sufficient. Thus each of these approaches has extended the conceptual boundaries of 'sustainable development' and the environment farther than have both sustainable growth and neo-Marxist approaches.

I have grouped the approaches to sustainable development into the following categories based on its primary analytic focus: 1) Geographical, 2) Indigenous-based, 3) Gender-based, 4) Epistemological, and 5) Holistic approaches. Even though the boundaries between these categories are somewhat soft, these groupings help identify some of the research trends of sustainable development.

Geographical approaches to sustainable development have identified the systemic properties and relations of the environment. Drawing from numerous geographic regions and from virtually every historical period, Cronon (1983), Crosby (1986), and William McNeill (1992), for example, demonstrate that the environment operates in terms of ecological systems which are dynamic and are

subject to permanent change. They show how human systems have interacted harmfully with environmental systems, leading to their destruction. Following a similar direction, Little and Horowitz (eds., 1987), McCay & Acheson (1987), Netting (1993), and Ostrom (1990) rely on case-study research to examine the human organization of local peoples and the relationship with their immediate environment (sometimes referred to as the commons, or common-pool resources).

Indigenous-based perspectives derive their positions in opposition to the marginalization of the majority of the world's indigenous peoples through mainstream development programmes. Analysts such as Bodely (1988, 1990), Burger (1990), and Netting (1993) have focused on the ways in which indigenous peoples have environmental sustainability incorporated into their socio-cultural values and organization.

In a similar approach, gender-based approaches have identified several ways in which the preservation or destruction of environmental systems is linked to the empowerment or marginalization of women (Häusler, 1992; Mies, 1986; Shiva, 1989; Mies & Shiva, 1993; Rodda, 1991; Moser, 1989). Haraway (1991) has extended this analytic framework by making the epistemological argument that the social creation of gender is directly linked to the social creation of nature. Others have also approached the problem from an epistemological approach by examining the ways in which the ideas and concepts associated with nature and the environment have been constructed socially, historically, and through language.

Examples of this type of analysis can be found in Evernden (1992), McKibben (1989), Worster (1994), and Wright (1992).

The holistic approaches were grouped together because their primary message is that an understanding of the interaction of numerous systems (environmental, socio-cultural, and political-economic) is necessary in order to mitigate environmental destruction. However despite this conceptual similarity, each of the contributors tends to have a somewhat distinct approach, such that no single 'holistic model of sustainable development' has emerged. This does not imply that the perspectives are contradictory, but that they have not been unified. Examples include Catton (1980), Conway and Barbier (1990), Hecht and Cockburn (1990), McMichael (1993), Milbrath (1989), The Editors of the Ecologist (1972), Redclift (1984, 1987, 1988, 1991), Trainer (1989) and Vandermeer and Perfecto (1995).

The primary critique of sustainable development is that it has not yet been fully-developed or unified as a theory, and that there remain several theoretical branches which are greatly informed from other more-developed social theories (e.g. Daly & Cobb, 1989). However, these do not negate the validity of sustainable development as a theory in its own right. A parallel argument could be made with respect to feminism as opposed to gender analysis, in that proponents of feminism have successfully argued that intellectual borrowing from other theoretical frames (such as symbolic interactionism and conflict theories) does not undermine the theoretical integrity of feminism as a theory in its own right.

These sustainable development analyses bring important insights in addressing the Costa Rican banana industry that are inaccessible within the conventional boundaries of the traditional development theories. For example, it is possible from these analyses to appreciate the broad range of variables associated with the environmental system. Further, these analyses reveal the close linkages among the political-economic, socio-cultural and environmental systems, such that all of these aspects need to be considered in order to address the complexity of issues associated with the Costa Rican banana industry.

Sustainable development avoids the reductionism associated with world systems theory, modernization theory, and with conventional development studies which tend to focus almost exclusively on production and the political-economy, thereby masking socio-cultural and environmental aspects, crucial to rural and sustainable development (Redclift 1987; Shiva & Mies 1993; Sachs [ed.] 1991, 1993). This has been the case with respect to most studies on the Costa Rican banana industry, which also tend to focus only on one aspect of the industry, such as productivity or ethnicity, or on one aspect of environmental degradation, such as deforestation. These narrow studies tend to obscure the interactions among socio-cultural, political-economic, and environmental systems. In addition, from the above discussion indicates the importance of examining the dynamics of these interactions at the micro level, and to appreciate the complexity and variations associated with the environmental system.

Banana production has historically been associated with deforestation, the alteration of land-use patterns, soil and water contamination through the use of chemical inputs, and a decrease in biodiversity (García & Chacón, 1995; MIRENEM, 1990, 1992; Tropical Science Center, 1982; UICN, 1995; Edelman & Kenen 1989; Vandermeer & Perfecto, 1995). However, following sustainable development, it is important to understand the impact on the environmental system in terms of its interactions with the socio-cultural and political-economic aspects of the banana industry (Hall 1991; Enloe 1990; Vandermeer & Perfecto, 1995).

b) World Systems Revisited

In addressing the Costa Rican banana industry, world systems theory provides the most appropriate analytical framework for several reasons. Nevertheless, the critiques and issues raised above deserve consideration.

World systems theory is sensitive to international issues, as is demanded by the predominance of the transnationals and the inherent international dynamics of the banana industry. The issue of globalization brings further attention to the importance of including the international political-economy as an analytical context for the banana industry in addition to the national level.

Several of the critiques of world systems theory discussed above, however, point to the necessity of greater consideration of the micro level of analysis. This is reflected in the present study with a case study banana plantation, with which these micro dynamics can be examined. This facilitates, for example, an analysis of the social organization of production and of issues relating to environmental destruction

and sustainability. Thus, in order to effectively contextualize the Costa Rican banana industry, the present study encompasses both the macro and micro levels of analysis.

In contrast to modernization theory, world systems theory provides a relatively open context in terms of development models. Although it is critiqued for being too vague on these issues, world systems theory allows for the possibility for alternative models of development. Also, world systems' emphasis on critique of the modernization paradigm and of the dominant discourse of development contribute to an approach of inclusiveness and of continuing debate of development issues. This is useful for addressing environmental issues because, following the critique raised by sustainable development, industrialization must be evaluated as a primary engine of development.

Also, as discussed above, by including analyses of power, world systems theory provides a useful set of conceptual tools for examining and exposing the structural bases of environmental destruction. Further, many theorists argue that socialism is the best (or the only) context for both analyzing and addressing environmental destruction. This is because socialism has as its main goal the provision of greater control over the social, economic, and political structures at the local level, allowing for increased collective and cooperative participation. Socialist political economies and world-system would therefore help alleviate the conflict between local and international demands on the state, and thus would decrease the burden on the state to orient policy to capital accumulation, and to the exploitation

of human and natural resources. This is seen as a significant contribution to the creation of a socio-cultural and political-economic context that does not entail the destruction of the environment (Barlow & Campbell, 1991; Chase-Dunn, 1989; Clow, 1991; Daly & Cobb, 1989; Gill & Law, 1988; Lummis in Sachs, 1992; Marchak, 1991).

In addition, world systems theory presents an embedded model for the market. In doing so, it provides a relatively inclusive model of development allowing for consideration of socio-cultural factors, of internal and external factors, and of the power relations inherent in the development process. However, in order to address the environmental concerns relating to the Costa Rican banana industry it is necessary to extend the embedded model to include the environment. This is because, as discussed above, the complexity and variations of dynamics associated with the environment can not be reduced to issues of power. Following the sustainable development critiques, in order to bring needed attention to the environmental destruction inherent in banana production, it is necessary to take a more systemic or holistic approach to questions of development and the environment.

Therefore, for the purposes of this study, the Costa Rican banana industry will be examined from a world systems perspective as a political-economic, socio-cultural, and environmental system that is articulated both at the micro and the macro level. Further, the interactions among these levels and disciplines will be examined. This will provide the necessary approach for addressing the issues

associated with globalization, the environment, and of the changes in the Costa Rican banana industry.

## Chapter 3: The History of the Costa Rican Banana Industry

This chapter examines some of the historical aspects of the Costa Rican banana industry. This begins with an examination of the early development of Costa Rica's Atlantic zone, including the role of coffee and the Costa Rican railroad. This is followed by a description of early banana production in Costa Rica, and of the formation of the United Fruit Company (UFCO). The UFCO was very successful with respect to the banana industry, and the reasons for this are examined in the following section. The final section provides an examination of some of the consequences of the UFCO's operations for Costa Rica's development. These include the following: 1) export-led development; 2) the development of a banana republic; and 3) the 1934 banana workers' strike against imperialism.

### 1. Coffee, the Costa Rican Railroad and Bananas

Bananas were not the first dominant agricultural crop in Costa Rica. In the early 1800s, coffee was the primary source of capital accumulation and formed the basis for capitalist development. In the Central Valley of Costa Rica, a mountainous zone in the middle of the country, free labourers cultivated coffee on plots of land owned by small farmers. Most of the economic gains for Costa Rica's upper classes came from the processing of coffee, not from land holdings. By the 1830s, coffee had become the dominant crop and was cultivated in almost all areas in the Central Valley. This expansion led to the development of the Central Valley, which contains Costa Rica's four primary cities (San José, Cartago, Alajuela, and Heredia) and the majority of the country's population. Exporting coffee brought Costa Rica into an

era of mercantilism and capitalist development. One result of the development pattern is the dominance of the Central Valley over the rest of the country, which remains to the present (Hall, 1991; Acuña Ortega & Molina Jiménez, 1991; Edelman & Kenen, 1989).

A small country, Costa Rica covers only 50,000 square kilometres between the Atlantic and Pacific oceans; the distances between the two oceans ranges from 200 to 300 km. Nevertheless, this location presented a substantial difficulty in transporting Costa Rican coffee to its European markets. The route to Costa Rica's Atlantic coast was extremely difficult, with mountains and dense jungle. Coffee destined for Europe was therefore transported by carts to the port of Puntarenas on the Pacific coast, and then shipped around Cape Horn, the southernmost tip of South America. In 1871, the Costa Rican government contracted Henry Meiggs Keith, who had built railroads in Chile and Peru, to build a 150-kilometre railroad to the Atlantic. The British bankers who financed the project, according to Edelman and Kenen (1989:60), "[took] advantage of the unsophisticated and trusting Central Americans," or, according to Gaspar (1979:21, translated), committed financial fraud against the Costa Rican government. In any event, before the most difficult section of the railroad could be completed, construction was suspended due to lack of funds (Edelman & Kenen, 1989; Gaspar, 1979; Chaverri, 1995; Stewart, 1967).

To complete the task, the Costa Rican government signed the Soto-Keith Contract of 1884 with Minor Keith, who had been responsible for the on-site supervision of the construction, and also the nephew of Henry Meiggs Keith. The

contract involved rescheduling Costa Rica's foreign debt to construct the railroad, and further featured a land grant of 800,000 acres, representing nearly 7% of Costa Rica:

> The government concedes to the company 800,000 acres of uncultivated state lands, along the railroad or at any other place in the national territory of the company's choice, including all natural resources within, in addition to the land necessary for the construction of the railroad and required buildings, as well as all kinds of materials needed for the construction work found inside the public lands all through the extension of the line, and two lots of the public land that was measured today in Limón harbor, to build docks, warehouses, and stations, all without any cost. The surveys and all the preliminary work for the division and distribution of the 800,000 acres of land will be the company's responsibility, since the government's only responsibility is to extend free property titles when needed. The government will not be able to establish taxes on that land for twenty years from the beginning of the period of the present concession, it being understood that, after the end of the twenty years, lands that had not been cultivated or otherwise utilized will revert to the government's possession without compensation of any kind (Meléndez, 1978:328, translation from Edelman & Kenen, 1989:61-2).

These lands were to become the plantations of the United Fruit Company (UFCO). Even though it was fairly common during this period for large infrastructural projects to be granted to foreign contractors, these land grants came to represent foreign economic penetration and a threat to national sovereignty (Edelman & Kenen, 1989; Meléndez, 1978; Murillo Chaverri, 1995; Contreras Solis, 1974; Acuña Ortega & Molina Jiménez, 1991).

One of the obstacles to be overcome in the construction of the railway and in the cultivation of bananas was a labour shortage in the Atlantic zone. In Costa Rica and other Central American countries, the majority of the population was concentrated in the highlands; relatively few people lived in the Atlantic coastal

regions. For this reason the majority of Costa Ricans who worked on both the construction of the railway and in banana plantations came from the Central Valley. The labour supply proved inadequate, however, "for nothing could induce the average native to enter the deadly zone of the *tierras calientes*, the dreaded hot lands of the Caribbean coastal region" (Adams, 1914:56).

Foreign workers were imported to work on the railroad and later in the banana plantations. In building the railroad, Keith had originally imported workers from China, Italy, and other countries. Starting in the late 1800s after a drop in the world sugar market, tens of thousands of workers were brought from the West Indies, especially Jamaica.

The work was extremely hard, the wages were poor, and progress was slow. Workers were exposed to malaria and yellow fever (Bourgois, 1994; Murrillo Chaverri, 1995). Adams (1914:56) explains:

> The construction of the first twenty-five miles of this railroad cost the lives of more than 4,000 men. This was the tribute demanded by the fever-infested jungles, and it was obtained despite the fact that the average working force did not exceed 1,500 men. Almost three full corps of laborers gave up their lives in the fight to conquer the mere fringe of the wilderness.

Keith had imported several rhizomes from Panama and begun cultivating bananas on lands adjacent to the railroad prior to the 1884 contract, to recoup some of his financial losses in the project. Trains transported the bananas to the port of Limón. By 1881, he had exported a total of 8,500 stalks of bananas from Limón. Keith was not, however, the only exporter of bananas at this time: in 1870, Lorenzo Dow Baker had taken several stalks of bananas from Jamaica to the United States,

resulting in huge profits. Baker established commercial relations with Andrew Preston, a prominent American fruit distributor, and in 1876, the Boston Fruit Company was formed. Meanwhile, Keith expanded his banana production, especially after receiving the land grants in 1884, and by the mid-1890s, had acquired large parcels of land for banana production in Colombia, Panama, Nicaragua, and Costa Rica. His New York distributor, however, went bankrupt in 1898, leaving Keith with losses of over $1.5 million dollars. Keith had no choice but to reach a distribution agreement with Andrew Preston, of the Boston Fruit Company. This agreement was transformed the following year into a merger of the Boston Fruit Company with Keith's three companies, Tropical Trading and Transport Company of Costa Rica, the Colombia Land Company, and the Snyder Banana Company of Panama. The result was the United Fruit Company (UFCO), founded in 1899 (Gaspar, 1979; Soto, 1992).

According to Acuña Ortega & Molina Jiménez (1991), the investment of foreign capital into Costa Rican bananas was an excellent business risk for several important reasons. First, the land was free. Second, the necessary infrastructure for transportation, i.e., the railroad, was in place. Third, banana cultivation techniques were already established, and thus the risk associated with experimentation would be minimal. Further, the railroad workers provided a source of labour already skilled at cultivating bananas. Bananas had been cultivated in Jamaica since the early 1800s, and many of the Jamaican workers had significant experience in the work. Finally, at this time in Costa Rica, liberalism was the dominant political

ideology, providing a favourable laissez-faire approach to foreign businesses. In sum, Costa Rica provided an extremely favourable political-economic and social context for the investment of foreign capital into banana cultivation (Edelman & Kenen, 1989; Murillo Chaverri, 1995; Gaspar, 1979; Salas Víquez, 1987).

Not only was the political-economic and social environment right, but the physical environment was almost ideal. The optimal conditions for banana cultivation are a hot and humid climate, with the ideal latitude between the equator and 15 degrees north or south. Costa Rica lies between 8 and 11 degrees north of the equator, with Nicaragua to the North and Panama to the South. The average temperature in the Atlantic zone is near the ideal of 30 degrees Celsius, and there is very little variation from day to night and throughout the year. Because banana plants are between 85 and 88% water, rainfall must be more than 2000 mm annually, preferably with little variability throughout the year. The Atlantic zone of Costa Rica receives between 3000 and 5500 mm of annual rainfall, with virtually no seasonal differences. This rainfall creates ideal conditions that do not require any additional input of water, and in fact drainage canals must be in place to take away excess water. Most banana cultivating regions in the world must input water for 3 or 4 months a year. Because increases in altitude increase the biological cycle of banana plants, they are generally cultivated at altitudes less than 300 metres above sea level. Costa Rica's Caribbean lowlands, below 500 metres in elevation, cover about 20% of the country. South of Limón the foothills of the Cordillera de Talamanca reach almost to the coast, and so the only cultivable lands lie along

rivers, which flow into the Caribbean Sea. In Costa Rica's Atlantic zone, strong winds are less frequent than in other tropical countries, and fruit losses due to winds are around 10%, compared to the 20-30% global average. Costa Rica thus provides an almost ideal geographical and climatic environment for banana cultivation (Sierra, 1993; Soto, 1992; Tropical Science Center, 1982; Hall, 1991; Atlas Didáctico, 1990).

2. The Structure Behind the UFCO's Success

Throughout most of the history of the banana industry in Costa Rica, the primary model of production was the monopoly (and later oligopoly) of the transnational plantation. The United Fruit Company (later named United Brands, and most recently Chiquita Brands International) perfected this model of extreme vertical integration and penetration at the level of the nation-state.

The UFCO had unprecedented success in Latin America, not only in the banana industry, but in many other ventures as well. The UFCO's presence in Latin America and the Caribbean shaped these nations in very fundamental ways, which have been variously interpreted. Some see the UFCO's actions as commendable. Adams (1914:13, 167) expresses this view:

> Every American citizen should in this connection know, consider, and profit by the history of the inception and development of the United Fruit Company. It is a story of the peaceful and honorable conquest of a portion of the American tropics, and one of which every citizen should be proud. It is a record of a monumental constructive work performed amid surroundings so difficult that the plain narrative seems more like a romance than the account of deeds actually performed. ... If the Nobel Peace Prize could be awarded to a corporation, the United Fruit Company would have valid claims to

> recognition. It has done more to pave the way for peace and prosperity in Central America and in the Caribbean countries than all of the statesmanship and oratory which have vainly been directed to the same purpose.

On the other hand, the UFCO's operations in Latin America and Costa Rica have also been interpreted as an imperialist conquest. Fallas (1954) is most associated with the expressions of this view:

> The United Fruit Co., as a launching pad for Yankee imperialism, finances brutal military incursions, provokes foolish wars between sibling nations, overthrows governments and nurtures oppressive dictatorships. From among the blood and the pain of the Central American peoples rises the powerful imperial banana company, the United Fruit Co., destroying the jungles and devouring the fertility of the Central American soil, stripping Isthmian governments of all dignity and transforming them into shameless dealers in national sovereignty, sucking the blood and the health from native workers only to return them later converted to hospital scraps. It rises up like a monster of misery and disgrace!

From either perspective, the UFCO was extremely successful in its ventures, primarily for two reasons. The UFCO had an incredible breadth of economic ventures, some of which gave the company strong roles associated with infrastructure and development. The UFCO also had a virtual monopoly in the banana industry. Each of these two advantages will be further examined.

One feature that defines the structure of the UFCO is vertical integration of the banana industry, whereby the "fruit companies tended to own or control all aspects of the industry from production to marketing, including internal transportation, loading and shipping" (Bulmer-Thomas, 1987:7). In addition to vertical integration, the UFCO had great breadth outside of the banana industry.

For example, in 1900, banana production occupied 58% of UFCO acreage in Latin America and the Caribbean (Adams, 1914:91). As Adams (1914:88-91) points out:

> The reading public has always associated the United Fruit Company solely with the banana industry, and there prevails a popular belief that its success has been due entirely to a mastery of the production and distribution of that tropical fruit. This is not so. From the very beginning the company was engaged in other forms of activities. It was a carrier of freight and passengers. It was a raiser of cattle and other livestock; it was an owner and builder of railroads; it was preparing to engage in the extensive production of sugar in Cuba, and it was cultivating many tropical products besides bananas.

Partly because of its size, and its success with the railroad, the UFCO held an important role in infrastructural development and services. Responsible for the creation of towns and the provision of rail and port services, the UFCO provided employment, not only on its banana plantations but also in its numerous businesses. Adams (1914:174-6) relates:

> Scattered through this banana empire are a number of picturesque settlements, some of which have arrived at the dignity of towns, with churches, places of amusements, well-kept streets, electric lights and most of the accessories of advanced civilization. It seems strange to reflect that all of these towns, railroads, bridges, docks, steamships, and the bustling city of Puerto Limón itself are merely parts of a giant banana farm, and that this is only one of the farms in a series which dot the Caribbean coast from Guatemala to Santa Marta, Colombia. Everywhere the observer sees the manifestations of a carefully designed machine calculated to yield the greatest possible result from a given application of endeavor.

The UFCO was therefore an important presence in many aspects of Costa Rican life and development. The company had similar operations in other Latin American and Caribbean countries. For example, in addition to a very large presence in Honduras and Guatemala, the UFCO owned all of the stock of the Belize

Royal Mail and the Central American Steamship Company, which owned and operated ten ships of from 1,000 to 1,600 tons (Kepner & Soothill, 1935).

As well as its breadth and its roles in infrastructure, another aspect of the UFCO's success was a virtual monopoly, not only on the export of bananas, but in other economic activities in Costa Rica. These monopolies were in place virtually from the beginning of the UFCO's operations (Bulmer-Thomas, 1987:7). The company's favoured economic position in Costa Rica was owed to several factors. Kepner and Soothill (1935:53) explain:

> That a part of this success has been due to service rendered through large-scale operations conducted with considerable efficiency will hardly be disputed. If this were the only source of its power probably little fault would be found with the company. This power has been increased, however, by various kinds of pressure which the company has exerted. Through strategic acts, both legal and illegal, the company has been able to shunt off or to throttle its competitors until it has become monarch of the Costa Rican banana industry.

One example of this pressure was that "with the transfer of the Costa Rica Railway to the Northern Railway Company, the United Fruit Company secured control of the docks and of all railway transportation from the Caribbean coast inland. Critics of the company maintain that this control of transportation has been used to discriminate against competitors' fruit" (Kepner & Soothill, 1935:64). In 1912, the Atlantic Fruit and Steamship Company tried to purchase bananas in Costa Rica, where the UFCO controlled rail transportation and docking facilities. "The result was a knock-out banana fight, in which each company tried to get the best of the other by any means available" (Kepner & Soothill, 1935:66).

One of the disputes stemmed from the mixed public and private functions of the UFCO's railroads. The Northern Railway was required to provide public service on its and the Costa Rica Railway's lines, but not on the private UFCO lines. The Atlantic Fruit Company argued that the lines for the transportation of its fruit were public, but the UFCO insisted that the lines were private (Kepner & Soothill, 1935).

As a result Kepner & Soothill (1935:67) recount that:

> One night, after bananas had been harvested and left on railway platforms for delivery the next morning to the Atlantic Fruit and Steamship Company, gangs of men under orders from an officer of the United Fruit Company arrived in motorcars and chopped up the fruit with machetes. On another occasion a train loaded with bananas to be delivered to the Atlantic's ship was delayed because the railway company held up the dispatcher's orders.

As this type of problem became more frequent, the governor of Limón wrote the President of Costa Rica (cited in Kepner & Soothill, 1935:67):

> It is my painful duty to inform you that I have received information to the effect that employees of the United Fruit Company and the Costa Rica Railway Company, supported by their chiefs, are obstructing persons selling their fruit to the Atlantic Fruit Company. At the present moment employees of the Costa Rica Railway and the United Fruit Company, according to information given me by a sergeant of police, are obstructing people carrying fruit on their shoulders to the metallic wharf of the Atlantic Company.

The Atlantic Fruit Company bought its fruit from smallholding cultivators, the most important of which was Cecil V. Lindo. Although he had reached an agreement to sell his lands to the Atlantic Fruit Company, he instead sold them to the UFCO for $1.5 million more than the agreed price with Atlantic, a move that effectively eliminated the strongest supporter of the UFCO's competition. Some of the cultivators supplying the Atlantic Fruit Company were contracted by the UFCO

for their total production. Following the legal allowances, the UFCO claimed the fruit to be theirs and placed a deposit of 20% of its value. But the court embargoed the shipment so that it couldn't be marketed. However, the shipment included fruit to which the UFCO had no claim. Nevertheless, the fruit was turned over to the UFCO and sold. Even though the Atlantic Fruit Company provided a list of cultivators totaling 1161 hectares, which were not under contract to the UFCO, soon after this incident the company withdrew from Costa Rica because of its irregular conditions (Kepner & Soothill, 1935).

Like all banana exporters of the time, the UFCO bought a portion of its bananas from independent producers. The UFCO required high quality fruit, as well as complete loyalty from its suppliers, an arrangement presented in two contrasting lights by Adams (1914:158, 181-2) and by Fallas (in Edelman & Kenen, 1989:77):

> There is keen competition to secure contracts with these growers. In every instance the importing concern obligates itself to accept all the bananas which pass a fair inspection (Adams, 1914:158).
>
> But in every case obligating them to sign one-sided contracts, written up by the company's own lawyers, according to which those private farmers were committed to sell their bananas exclusively to the United Fruit Company (Fallas in Edelman & Kenen, 1989:77).
>
> Laborers unload the bananas and pile them carefully on the long wooden platform. The 'receiver' keeps careful watch and count. Suddenly he darts toward a negro [sic] carrying a bunch of bananas and waves his hand. The negro knows what this means. The bunch which he was about to deposit on the platform has been rejected. It is tossed to the ground beyond the platform and becomes the nucleus of a pile which will grow steadily as the hours pass. ... The darky [sic] who delivers this installment of bananas receives from the receiver-inspector a slip of paper which serves as a receipt, and on this printed

slip is a record of the number of bunches of bananas delivered (Adams, 1914:181-2).

[the bananas were sold] at the meanest price indicated per bunch received (note well: per bunch received), less a percentage that was subtracted from each bunch as a payment on the debt contracted (Fallas in Edelman & Kenen, 1989:77).

It frequently happens that this arrangement works to the decided loss of the importing concern. Large quantities of fruit are offered for which there is no profitable market in the United States or abroad, but it must be accepted and paid for at the contract price (Adams, 1914:158).

The United Fruit Company, which has always monopolized the United States' banana market, could operate in that market at the expense of the private [Costa Rican] farmer, because sometimes when the price tended to go down in the Yankee market it was more convenient for the United to throw away the bananas here, since the bananas that were discarded were not its loss but the farmers' loss. Everything was organized with the intention of facilitating these infamous operations (Fallas in Edelman & Kenen, 1989:77).

Newspaper stories have been printed to the effect that the importing companies hold the independents at their mercy by declining at times to accept banana offerings except at ruinously low prices, the unfortunate growers being forced to accept the price tendered or see their bananas rot on the wharves. There is not a word of truth in such tales (Adams, 1914:158).

And when a Costa Rican firm began to purchase all those discarded bananas from the farmers at a magnificent price to sell within the country and also abroad, the United forced the farmers to chop up the bananas that they threw away, so they wouldn't be able to sell them. That's how far the United Fruit Company went (Fallas in Edelman & Kenen, 1989:77).

Regardless of the interpretation, tactics to maintain control over the market and competition are found in the history of the UFCO in Honduras, Colombia, Guatemala, Jamaica and Panama. These tactics, as well as the depth and breadth of the UFCO's penetration led to its nickname of 'the octopus' [el pulpo]

(Hanington,1980; Bulmer-Thomas, 1987; Dosal, 1993; Kepner & Soothill, 1935; Bucheli, 1994).

3. Other Consequences of the UFCO for Costa Rica's Development

a) Export-Led Development

The negative impacts of the UFCO on Latin American countries such as Costa Rica are legendary. The expansion of the UFCO model of production in Central America was the basis for the expression 'banana republic', which described a developing country dependent on a single crop or industry. Even though the negative effects are more widely known, some significant positive effects resulted from the UFCO's presence in Costa Rica.

The banana industry was, and still is, concentrated in the Atlantic zone of the country. At the end of the 1800s and the beginning of the 1900s, the Atlantic zone had an extremely low population with few economic advantages. The introduction of the banana industry in the Atlantic zone provided a very lucrative source of agricultural employment for this zone, and the UFCO's operation in that area was perceived as a low-risk economic boost to an area with little economic value (Seligson, 1984; Acuña Ortega & Jiménez, 1991). Adams (1914:356) comments:

> [The UFCO] has proved to the world that these tropics can be converted from a harassing liability into an asset of stupendous value, and it has solved for the world the problem of transforming deadly swamps and jungles to gardens.

Costa Rica was the first Central American country to complete Atlantic rail service. Its commercial banking system was more developed and its currency more stable than that of other Central American countries. By the early 1900s, the exports

of bananas and coffee dominated Costa Rica's economy, and this export-led development helped to integrate Costa Rica into the world market. By 1920, Costa Rica was the wealthiest country in Central America, in terms of Gross Domestic Product (GDP) per capita (Bulmer-Thomas, 1987).

These positive impacts of the UFCO are support the modernization theory perspective, which states that in order for development to occur, a country should have basic infrastructure in place and create an export sector in a field of comparative advantage. The source of capital required for these ventures is typically large corporations in a relationship of direct foreign investment, bilateral aid from foreign governments, or foreign loans. This input of capital is crucial to establish the preconditions for development, and from this perspective the UFCO provided a significant contribution to Costa Rican development.

b) The Development of a Banana Republic

Although the UFCO was instrumental in Costa Rica's economic development, the country's dependence on the export of coffee and bananas had several negative consequences. The following section examine these consequences: 1) political-economic instability; 2) deforestation, malaria and Panama disease; 3) ethnic conflict, and the inhibition of indigenous development and cultural identity.

i) Political-Economic Instability

One primary impact was the political-economic instability caused by over-dependence on the export of coffee and bananas. On the positive side, coffee and bananas are complementary in that they have different cultivation sites and

schedules, and different marketing characteristics, making it less likely that both will have poor economic performance in the same year. However, the stability afforded by this relationship was undermined by the high degree of foreign control of the banana industry with virtually no taxation required on either imports or exports.

Further, the vertical integration of the industry resulted in the dominance of foreign currency. Local currency was used primarily for wages and local expenditures, of which there were very few. The company imported most of the required inputs tax-free. Further, a large proportion of the wages paid were returned to the company through purchases at the company stores. According to Bulmer-Thomas, (1987:12), "the enclave nature of banana plantations meant that the higher wages paid were a stimulus to increased imports (purchased through company stores) rather than to additional domestic production." These factors contributed to a decrease in national economic stability (Bulmer-Thomas, 1987; Bourgois, 1994; Kepner & Soothill, 1935).

The political-economic importance of coffee and banana cultivation led to a concentration of resources, including labour, towards these activities. In 1929, coffee accounted for two-thirds of Costa Rican exports and bananas for one quarter (Kepner & Soothill, 1935: 52) and by 1959, the UFCO was the largest single private landowner, the largest single business, and the largest corporate employer in Guatemala, Costa Rica and Honduras (Fortune in McCann, 1976:61). The dominance of coffee and bananas in effect made it more difficult to pursue activities that would diversify the economy by providing products or services oriented

towards national development, instead of towards export and foreign interests (Bulmer-Thomas, 1987:11-12).

Thus, the Costa Rican economy was not diversified because of the primacy of coffee and bananas, and in addition, a large proportion of the political economy was both controlled by, and oriented towards foreign interests and demands. Costa Rica's dependence on coffee and bananas and the political-economic dominance of these two industries remains to this day.

ii) Deforestation, Malaria and Panama Disease

The massive implementation of the banana industry in the early 1900s as virtually the only economic activity in the Atlantic zone had numerous environmental impacts, two of the more serious being the infection of all banana plantations with Panama disease, and deforestation, which led to an increase in malaria.

To prepare land for banana production, it must first be deforested. According to the Tropical Science Center (1982), 99.8% of Costa Rica was originally covered in forests. Thus in the Atlantic zone of Costa Rica, planting banana plantations over almost 50,000 acres (Adams, 1914:171) means, simply, deforesting 50,000 acres of tropical wet and moist forest. These types of forests are the most species-rich in Costa Rica: the widespread cultivation of bananas thus had a significant effect on the ecology of Costa Rica's Atlantic zone, as Adams (1914:156) portrays:

> If the reader possessed an imagination capable of comprehending a banana plantation one-third of a mile wide and extending from New York City to Chicago, with this wilderness of bananas bisected by a well constructed and equipped railroad, he will begin to obtain a conception of what has been created from a virgin tropical wilderness.

The massive deforestation required for plantation development in the Atlantic zone area resulted in the destruction of ecosystems and habitats for numerous species, a massive loss of biodiversity. Deforestation also leads to topsoil loss and the sedimentation of waterways (García & Chacón, 1995; MIRENEM, 1990, 1992; Tropical Science Center, 1982; UICN, 1995).

Deforestation in the Atlantic zone also led to an increase in malaria. The parasite that causes malaria is carried and transmitted by the anopheles mosquito, which breeds in standing water. Quite simply, deforestation and the development of the plantations created profuse areas of standing water. The spread of malaria among banana workers was exacerbated by a high concentration of workers in inadequate company housing. Kepner (1936:114-5) explains:

> Entire families occupy single rooms about twelve feet square. Some of these families, accustomed to living in close quarters, increase the congestion by taking boarders. Bachelor camps often have no partitions. The typical camps, short or long, have small unscreened front and back porches. The latter shelter charcoal stoves, or native ovens are set up under crude roofs raised by the occupants in the yard. Window facilities consist of three-foot-square holes and wooden shutters. The water supply is obtained from a nearby stream, [or] caught in buckets under the tin roofs.

The banana plantations and workers' housing provided ideal conditions for the propagation of malaria. The situation became so severe that in 1924, Dr. Deeks,

who was the head of the UFCO's medical department wrote in his annual report (cited in Kepner, 1936:111):

> Agricultural development and commercial activity on a large scale are impossible until medical science brings tropical disease under control, and sanitation transforms pestilential areas into healthy localities.

For the most part, the UFCO ignored the advice of their head medical officer. Implementing measures to decrease the spread of malaria was neither easy, nor inexpensive, as Kepner (1936:112, 215) explains:

> The extent of banana regions is so tremendous that no unified system of extirpating the anopheles has been undertaken. Methods of sanitation have varied from time to time and from place to place. Especially valuable when tried has been the drainage of low-lying areas and the flushing of other pest holes with sea water. Owing to the high cost of drainage, however, many stagnant pools have been left untouched, while others have been covered at regular intervals with crude oil or Paris green mixed with sawdust. Other methods of sanitation sometimes adopted include the clearing away of refuse, grass and underbrush, the construction of sewers, the paving of streets, and the safe-guarding of the water supply. Since, however, its medical department is essential to its business enterprise, it might well bear the expense itself instead of deducting 2% hospital dues from the wages of its workers. ...If such action were supplemented by more thorough sanitation and by a determined effort to make workers' camps mosquito-proof, the malarial scourge would be greatly reduced in the future.

The development of massive tracts of banana plantations, therefore, resulted in widespread deforestation, a decrease in biodiversity, and an increase in malaria. It also resulted in the spread of Panama disease through all banana-growing regions of Costa Rica, and Central America.

During this period the Gros Michel variety of banana was the dominant cultivar throughout Central America. As banana plantations increased, large tracts

of land were being monocropped in bananas. One consequence of monocropping cloned crops is that the crop, whether banana or any other, is very vulnerable to diseases and pests. As a result, Panama disease swept through the Central American banana industry.

Panama disease, or fusarium wilt, is caused by Fusarium oxysporum. Soil-borne, it initially attacks the banana plant roots, growing into the corm, up the stems, and eventually into the leaves. Panama disease is fatal to banana plants, and there was no effective control of the disease. Relocation was already a part of the banana production cycle because of soil degradation, which required moving production every fifteen years. However, Panama disease decreased plantation longevity to between two and five years. Costa Rican banana producers simply abandoned affected areas and moved; during the 1920s a large proportion of Costa Rican banana production was shifted to uninfected areas. The timing coincided with the UFCO's search for more productive plantation lands.

In the mid-1920s the UFCO made a commitment to science-based production techniques, hoping that they would provide an answer to Panama disease. They did not. They did, however, begin the standardization and deskilling of banana work. At the beginning of the Panama disease scare, the UFCO had started work on developing a strain of banana resistant to Panama disease. There is some evidence that the UFCO was successful in this venture, but the varieties developed were not acceptable for the market because they were smaller and easily bruised.

The massive effects of Panama disease on Central America's banana production were the direct result of an ecological vulnerability caused by vast amounts of monocropping cloned bananas. The disease resulted in the UFCO's implementation of a systematic programme of scientific production techniques, a focus that has remained, especially in the transnationals, until the present.

The scientific approach, however, did not resolve the problem of Panama disease, which continued until the Cavendish variety replaced the Gros Michel variety during the late 1950s and early 1960s. Cavendish are resistant to Panama disease, but are vulnerable to nematodes and to sigatoka disease. Even then, the success did not represent a clear victory over disease, because the basic problem of monocropping cloned bananas continued. This environmental vulnerability was, and still is exacerbated by Costa Rica's political-economic dependence on banana production (Adams, 1914; Bulmer-Thomas, 1987:11; Jansen, 1998; López, 1988; Marquart, 1996; Vandermeer in Janzen (ed.), 1983:75-77; Soto, 1992; Sierra, 1993).

iii) Ethnic Conflict and Marginalization

One of the important transformations created by the banana industry in Costa Rica, is the development of the plantation model of production in Costa Rica's Atlantic zone. Although the plantation model had already been implemented for sugar production in the West Indies, the extent to which it was implemented in Costa Rica and other Latin American countries by the UFCO represented a significant socio-cultural, political-economic, and environmental transformation.

This transformation inhibited indigenous development in the Atlantic zone, and contributed to ethnic conflict and to a resentment of the UFCO.

As discussed earlier, the success of the UFCO was largely based on its strong role in development and infrastructure creation, as well as its vertical integration and breadth. The UFCO was heavily involved in virtually all aspects of daily life in the Atlantic zone of Costa Rica, especially on the banana plantations. In addition to employment, the UFCO provided workers' housing, recreation facilities, and commissaries for the purchase of household supplies. Provision of these services, essential because of the extreme isolation of the zone, was not, however, a charitable act by the UFCO on behalf of its workers. Rather as Fallas (1955 in Edelman & Kenen, 1987:77) explains, it was a profitable venture that fit with the UFCO's strategies of monopoly and vertical integration:

> The commissaries, through which the United exercised a total monopoly of commerce in the banana region, sold articles of whatever quality they pleased and at the most scandalous prices, even though through the tolerance of our government, the company did not pay taxes of any type for importing these articles.

The predominance of the UFCO in virtually every aspect of life was not limited to plantation workers but extended to the entire Atlantic zone. As Kepner (1936:88) explains:

> Practically all of the inhabitants of a former jungle area, which is now an integrated part of the banana empire, are dependent in many ways upon the economic giant which hires laborers, buys fruit, regulates trains, operates docks, dispatches radio communications, exerts strong influence in national politics, and overshadows all businesses and other interests in the region. Most of the people who are not employed by the company directly are dependent upon it indirectly.

In this way, the UFCO created a banana enclave of the Atlantic zone of Costa Rica, where virtually every facet of every life involved the UFCO either directly or indirectly. This dependence on the UFCO was exacerbated by the absence of local development ventures independent of the UFCO, which left the people of the Atlantic zone vulnerable to the business cycles of the UFCO. Kepner (1936:89) explains:

> Banana booms subside quickly, however. The contraction of banana cultivations is more acute ... since in most regions old lands abandoned because of the Panama disease and soil exhaustion are offset by new lands planted. As banana lands die, communities dependent upon them languish and in time die also. The large division headquarters continue to exist as long as fruitful lands abound somewhere in the hinterland. But when, as in Costa Rica, the total production of a division falls off, port cities like Limón are affected disastrously.

These effects were worsened by the UFCO's control over local infrastructure. In July 1930, La Tribuna (July 30, 1930, cited in Kepner, 1930:90) reported that:

> Talamanca, Costa Rica, near the Panamanian border has so fallen from its former economic position that its residents have complained of the removal by the fruit company of the latter's telephones, rails and bridges, so that not even a roadbed remained by which they could occasionally hide out of the 'highlands of weeds' into the neighboring municipalities.

Banana plantations are extremely labour intensive, so that the management of workers has always been a central issue for banana production. In addition, controlling the labour supply was necessary because the large amounts of land in the Atlantic zone led to the presumption that people would not work for wages unless they were compelled. Land access was restricted, and force was used to control the labour force in order to support the export of bananas. According to

Bulmer-Thomas, (1987:12) "communal lands were alienated and anti-vagrancy laws were strengthened ... [and these] restrictions on access to land discouraged domestic use agriculture."

It is hardly surprising, then, that given the nature of banana production, the poverty of the workers, their dependence on the UFCO, and their lack of available alternatives, there was a high degree of worker exploitation. Bourgois (1989, 1994) argues, in fact, that exploitation of various ethnic groups played an important role in the relations of production in this model.

Plantation workers were ethnically diverse. In addition to Latinos from Costa Rica and other Latin American countries, there were indigenous workers including Bribris, Guaymí, and Kuna. Tens of thousands of Black workers had been brought from Jamaica to work on the railroad and later in the banana plantations; many more Caribbean Blacks came to the Atlantic zone of Costa Rica after the completion of the Panama Canal in 1914. By 1927, there were 19,136 Jamaicans in Costa Rica, almost all in the Atlantic zone (Bourgois in Edelman & Kenen, 1989).

Jamaican workers had several advantages over the Central Americans. They had a higher degree of resistance to malaria, which often had serious and devastating complications, and could be fatal. They also spoke English, the language of the supervisors and management. Many had worked in sugar plantations in Jamaica and were accustomed to the types of practices and organization of the banana plantations. However, the Jamaicans' most important advantage was that many were experienced in cultivating bananas, which had been

introduced to Jamaica in the early 1800s and had become a common crop for Jamaican smallholders.

These advantages enhanced the Jamaicans' positions on the plantations, partly because of their previous experience and partly because it was easier for white management to relate to them. They tended to receive higher-status jobs on the plantations and were stereotyped as management-friendly, as indicated in the following passages by Adams (1914:180,3):

> Along one of the tramways comes a small train of loaded banana cars hauled by a team of mules, the entire equipment in charge of a grinning Jamaican negro [sic]. He is an employee of the company and he gets paid so much for each bunch of bananas he cuts on the particular tract placed in his care. He is a qualified expert and is presumed to know just when to cut bananas. ... As early as six o'clock in the evening the small army of men who are to do the loading begin to arrive. They know that there is nothing for them to do until seven, but they come early because they love the fun and excitement. Most of them are Jamaican negroes, black as the ace of spades and care-free as the birds who sing in the adjacent park.

Blacks were also stereotyped as lazy in part, ironically, because of their high work aspirations. Because they actively pursued better positions and were favoured by management, they tended to be over-represented in the less strenuous jobs throughout the banana production process.

The stereotypes of the Indigenous workers on the plantations were not nearly as favourable, as Adams (1914:161-5) demonstrates:

> The lower classes are Indians of innumerable tribes and varying customs, but a considerable portion of them obey the latent instinct of hatred for physical labor. In this particular they differ in no essential respect from the Indians with whom we are familiar, ... The native Indian tribes have absorbed some of the attributes of Caucasian civilization- which is the only way an Indian can acquire the first

> veneer of the civilization. Each succeeding generation of Costa Rican Indians has sloughed off some hereditary tribal trait and substituted for it an energetic habit of the dominant white man. Thousands of them have acquired the working and saving habit, and the stern enforcement of peace has dulled and almost subdued the instinct to take the warpath at the instigation of the first ambitious revolutionist who provides guns, ammunition, and a promise of loot.

Banana plantations were extremely hierarchical, and the workers' ethnicity played a prominent role. Top management consisted primarily of white North Americans (Bourgois, 1989; 1994). According to Kepner (1936:176-7), it was the UFCO's policy to avoid placing Costa Ricans "in high positions, because of their divided allegiance in disputes with national governments." Middle management workers were primarily upper class Costa Ricans, and among the labourers, Blacks held higher status jobs, while lower status jobs were distributed among Latinos and Indigenous workers, with Indigenous workers receiving the most undesirable jobs.

This ethnic hierarchy was also reflected in access to various company facilities, including housing and recreation. Limón was divided into the Grey zone, where workers lived, the Yellow zone, where supervisors lived (although most were Costa Rican), and the White zone, where only top management ('gringos') could enter (Cerdas Mora, 1976). Ethnic conflict and segregation became social conventions throughout the Atlantic zone.

The significant role of the UFCO in virtually every aspect of daily life and the resulting importance of tangible symbols of ethnic hierarchy characterized the creation of the plantation labour force by providing an extremely effective means of social control. Fallas (1954 in Edelman & Kenen:78) explains:

> The company, to be safe from possible rebellions, would stir up the hatred of the whites against the blacks and of the blacks against the whites. [It should be noted that 'whites' in this citation refers to Latinos and not to North Americans or Europeans] And it was successful. More than once, when the black workers there in Limón were exasperated and tried to rebel, the white workers willingly offered themselves to help abort that effort. Of course, the black workers responded in the same way when the whites tried to protest. The company tranquilly exploited each group equally.

The strong presence of the UFCO in people's work and their private lives was instrumental in the development of several features of the Atlantic zone. One of these was the development of identities, defined not only in terms of their ethnicity, but also as UFCO workers.

Identity development was manipulated in several ways. First, the creation of the plantations effectively amalgamated groups of people with no previous ties to each other, but who were brought together as workers for the banana companies. For most workers, excluding management, plantation work was physically hard, the living conditions were poor, and workers and their families had very few life options. The plantations were physically isolated from the rest of Costa Rica, and even as late as the 1930s and 1940s laws prevented Blacks from leaving Limón province (the Atlantic zone). Bulmer-Thomas (1987:12) explains the rationale for this:

> Black labour, being free, was better remunerated than highland labour on coffee fincas. Any impact this might have had on national wage rates, however, was neutralised by a fairly rigid segmentation of the two labour markets; highland labour was reluctant to migrate to the coast and [B]lack labour was often forbidden from migrating to the highlands.

Another aspect of the socio-cultural impact of the UFCO's virtual omnipresence in people's lives was manifested as reification of the UFCO and the development of strong reactions towards the company. The UFCO became known in Costa Rica as 'Mamita Yunai'. 'Mamita' is a diminutive form of 'mother', and 'Yunai' is a contraction of the Spanish pronunciation of 'United'. This nickname signals the subjective immediacy of the UFCO in its workers' lives.

Carlos Luis Fallas used 'Mamita Yunai' as the title for his novel depicting life in and around the banana industry in Costa Rica's Atlantic zone. Born in 1909, Fallas, affectionately known as Calufa, began working for the UFCO at age sixteen. Several years later, he became involved in the labour movement and the Communist Party in the Central Valley. Because of his political activities, he was exiled to the Atlantic zone in 1933, where he became a banana union leader (Edelman & Kenen, 1987:76).

Fallas' novel, which is considered autobiographical, provides a graphic account of working for 'Mamita Yunai' (the UFCO), and of life in the banana company towns in Costa Rica's Atlantic zone. The novel, considered an important Costa Rican narrative work, tells of the never-ending struggle to live and flourish in spite of the duress of life in the banana industry. It is important to many Costa Ricans, not only because of its historic value, but because it represents Costa Rica's ongoing struggle against foreign interference and control. Fallas' novel, *Mamita Yunai* is a required text in Costa Rican secondary schools.

*Mamita Yunai* is not the only work of fiction to express banana workers' and many Latin Americans' strong feelings towards the UFCO. Both Pablo Neruda's poem *La United Fruit Co.* and Gabriel García Márquez's novel *Cien Años de Soledad* (*One Hundred Years of Solitude*) reflect the degree to which people's cultural identities were shaped by the UFCO. Further, following from the notion that culture can be a locus for counter-hegemonic activity, these works can also be seen as active responses to the perceived oppression of the UFCO.

The following passages are from García Márquez (1967:390) and Neruda (Belitt (ed.), 1961:148-151) respectively:

> He tried to reconstruct in his imagination the annihilated splendor of the old banana-company town, whose dry swimming pool was filled to the brim with rotting men's and women's shoes, and in the houses of which, destroyed by rye grass, he found the skeleton of a German shepherd dog still tied to a ring by a steel chain and a telephone that was ringing, ringing, ringing until he picked it up and an anguished and distant woman spoke in English, and he said yes, that the strike was over, that three thousand dead people had been thrown into the sea, that the banana company had left, and that Macondo finally had peace after many years.

> When the trumpets had sounded and all
> was in readiness on the face of the earth,
> Jehovah divided his universe:
> Anaconda, Ford Motors,
> Coca-Cola Inc., and similar entities:
> the most succulent item of all,
> The United Fruit Company Incorporated
> reserved for itself: the heartland
> and coasts of my country,
> the delectable waist of America.
> ...
> Then in the bloody domain of the flies
> The United Fruit Company Incorporated

unloaded with a booty of coffee and fruits
brimming its cargo boats, gliding
like trays with the spoils
of our drowning dominions.

Both these passages from well-respected Latin American writers present a picture of the subjective socio-cultural impact of the UFCO.

Thus in the development of the Atlantic zone, the UFCO controlled virtually the entire infrastructure, and created a socio-cultural context of ethnic conflict. One positive result was that Black culture solidified, and has maintained its strength and vibrancy to the present. However, these development patterns also suppressed any locally driven development that would have competed with the business strategies of the UFCO. The suppression profound affected the people living in the Atlantic zone, many of whom directed their anger and frustrations towards the UFCO. These people became Costa Rica's agricultural labour class, living in what would become the country's periphery.

c) The 1934 Banana Workers' Strike Against Imperialism

During the early 1930s, socio-cultural tensions based in the lack of indigenous development and ethnicity, were exacerbated by plantation closures due to Panama disease and the economic depression. According to Kepner (1936:136-7), after the stock market crash of 1929, all of the UFCO's wages were reduced. In Costa Rica, wages were cut twice in 1931, once by 20%. In 1932, wages were cut by 10% twice. Unemployment rose as banana production and prices decreased, partly due to Panama disease (Bulmer-Thomas, 1987:50; Marquardt, 1996). Thus in the early 1930s, the long-term political-economic, socio-cultural, and environmental impacts

that derived from dependence on bananas were heightened, and the effects greatly affected the workers of the Atlantic zone.

In 1933, Carlos Luis Fallas, exiled to the Atlantic zone for his activities with the Communist Party, became involved in the banana unions and began to educate and mobilize workers. In 1934, Fallas and Jaime Cerdas Mora, backed by the Communist Party, led a massive strike, which eventually involved ten thousand workers. Costa Rica's total population was only 500,000 at that time. The strike demands centered on increased wages and workers' rights, and adequate and accessible health facilities, but at the heart of the matter was the exploitation of banana workers. As Cerdas Mora (1976) explains:

> The workers were the object of acute exploitation; not only were they paid badly, but they were kept in housing that was unhygienic and filthy; a few thatched huts in which 40 to 60 single people lived, without a bathroom. There was no medical personnel of any sort. The only places where you could be seen were in the centre in Siquirres and at the hospital in Limón. The banana plantations extended from Guápiles to Sixaola [over 150 km.]. From those remote places people were obliged to go to Limón [over 70 km.]. Those from Guápiles went to Siquirres [over 30 km.] because it was closer; there was sort of a dispensary which wasn't attended by a doctor, but a nurse. The most common ailment was malaria and the only thing they gave was quinine; there weren't any other medications.
> As if this weren't serious enough, the banana company had its own commissaries which distributed the basic necessities (imported tax-free). ... Plantation owners didn't pay their workers in cash, but with coupons so that upon receiving their salaries they could only buy at the plantation commissary at their prices. In that manner the worker had a double exploitation: exploitation of salaries and bad housing, and exploitation in the commissaries, which made the situation even more difficult.

The condition of the Siquirres clinic described above was the subject of a formal complaint by the department of public health against the UFCO in 1931. At

that time, the clinic "comprised an old building without hygienic conditions, supplied with three hotel cots, some surgical instruments and medicines, in the care of an untrained attendant who acted as physician, surgeon and druggist" (Report of congressional commission in Kepner, 1936:121).

Although many workers and some officials were the victims of violence, the strike was considered a great success. It resulted in significant improvements to the health and sanitary conditions on the plantations, to better working conditions, and in wage increases (Edelman & Kenen, 1989; Barahona Riera, 1980). As its leader, Fallas (in Edelman & Kenen, 1989:82), proclaimed:

> They were two black weeks of violence and terror on the plantations of the Atlantic! Two weeks that forged forever the indomitable, combative spirit of the workers of the banana plantations, which has since been proven so many times. Compañeros, that great strike of 1934, so violent in its last stage, so important to the later development of the Costa Rican revolutionary and anti-imperialist movement, made the United Fruit Company back down.

Fallas viewed the strike as an act of anti-imperialism against the UFCO, whose presence was perceived of as an invasion of Central America by American interests. He (Fallas, 1954) expresses this view in no uncertain terms in the following passage:

> With the pirate flag of the United Fruit Co., the Yankee imperialists managed to get to the very heart of Central America. This was economic conquest, and with it nearly political conquest. The United Fruit Co. poured out the gold, corrupting presidents and ministers, degrading members of parliament and journalists. In this way, concession after concession was made, each shameful and humiliating for Central Americans. A dirty, scheming policy of gold and blood, brutality and corruption. . .
>
> Behind the United Fruit Co. pirates came other Yankee privateers to

> Central America. Railroad concessions, hydro-electric concessions, oil concessions. Later, huge loans and commerce were imposed by the United States government to knock down the economic life of Central America. Of all Central American trade, averaging 250 million dollars annually, 60% is imports and 40% exports. Central Americans are importing articles made in the United States, at the price set by the US, and we export agricultural products and raw materials to the US at the price set by the US. A juicy deal for Yankee merchants!
>
> Terror, economic retardation, deformation of national spirit, degradation of popular culture and greedy exploitation. That is the policy that Yankee imperialism has practised and continues to practise in Central America!.

Both Falls and Cerdas Mora, the leaders of the 1934 banana workers' strike, were members of the Costa Rican Communist Party, and thus their perception of the UFCO as imperialist is not surprising. However, Cerdas Mora (1976) argues that this definition also reflected the views of the banana workers at the time:

> During those years we used strong language: radical and openly anti-imperialist. ... The people that lived in the [Atlantic] zone understood us perfectly, because their lives were separate, including geographically, from the foreign businessmen of the UFCO. ... The people of the zone understood us with total clarity when we referred to 'anti-imperialism'.

Fallas and Cerdas Mora were not alone in the assessment of the UFCO as imperialism. Kepner (1936), and Kepner and Soothill (1935) also regarded the UFCO's presence in Costa Rica as imperialistic. This interpretation is consistent with those working from the perspective of Latin American dependency theory, including Cardoso and Faletto (e.g. 1969), Frank (e.g. 1971), Prebisch (e.g. 1964), and Furtado (e.g. 1971).

From this perspective, the UFCO represented American imperialist interests that benefited the metropolis (United States) at the expense of the periphery (Latin

America). With the compliance of national governments and the use of public funds, the UFCO transformed Costa Rica so that the infrastructure of the country served the UFCO and not Costa Rica itself. Costa Rica, dependent on the UFCO for basic services, thus became part of the international periphery of the United States. These dependency relations are considered the primary cause of the underdevelopment of Latin America (Cardoso & Faletto, 1969; Contreras Solis, 1974; Frank, 1971; Furtado, 1971; Prebisch, 1964).

The issue of imperialism is thus central to an assessment of the UFCO during this early period in the banana industry. One aspect of imperialism is the degree to which there is foreign penetration into areas of national control, such as the state.

Acuña Ortega and Molina Jiménez (1991:140-50), in their analysis of the social and economic history of Costa Rica (1750-1950) argue that although the Costa Rican banana enclave included imperialistic tendencies with respect to the UFCO, it was neither a linear, nor a straightforward process. Bulmer-Thomas (1987:15) shares this position, arguing that the nature of Costa Rica at that time was such that to protect their business interests, the UFCO would have had to be actively involved in local politics.

> In the absence of a profitable nationally owned export sector, the upper classes continued to gravitate towards politics; stable, or even strong, government was virtually impossible in a country where public employees often had to be paid in postage stamps and election time invariably saw the involvement of different fruit companies in support of rival candidates. ... [I]t is difficult to see how they could have resisted the temptation to meddle in internal politics. The pressure to become involved and safeguard a potential interest must have been enormous.

The argument for the active involvement of the UFCO in Costa Rican politics is strengthened by the consideration of the many social and familial ties between UFCO executives and leading Costa Rican politicians during this period. In 1883, Minor Keith married Cristina Castro Fernández, the daughter of former Costa Rican president, José María Castro Madriz, who was then Minister of External Affairs, and had previously been president of the Supreme Court. This brought UFCO interests and one of Costa Rica's most influential families together (García B., 1995; Stewart, 1967:57). In addition to providing a channel of influence, this marriage was significant because of the high degree of endogamy within Costa Rica's most powerful families (Stone in Edelman & Kenen, 1987).

García (1995) reports that the vast majority of the UFCO's lawyers were also prominent politicians, thus providing another link between the UFCO and the State. In local politics, Keith and the UFCO were strong supporters of then future president Tinoco. García (1995) argues that the ties between the UFCO and Costa Rica's most powerful families were maintained over many decades. Further, she argues that the relationship between the State and the banana industry, and the use of indirect channels of influence was one of the most important resources of the UFCO. This was significant for the UFCO, as Adams (1914:165) reports:

> In all of the long forty-four years since Minor C. Keith obtained the permission of the Costa Rican Government to begin the construction of a railroad from the Caribbean coast to the city of San José, there has been nothing approaching friction between the enterprises then founded and the successive officials of this progressive republic.

Despite the unambiguous accusations of imperialism, the UFCO's presence in Costa Rica was not considered imperialistic or exploitative from the American perspective at the time. At this time, the prevailing conception was that the success or failure of development resulted in benefit or liability to all other countries. This thinking morally obliged any developed country to take an active interest and involvement in the affairs of other countries. As Adams, (1914:9,12) explains:

> There is one dominant reason why the American tropics have not participated in the stupendous progress of all other tropical sections, and that reason is this: Instability of their governmental conditions has estopped [sic] the capital and the enterprise of the world from undertaking the development of their wonderful tropical resources. For this state of affairs the United States is largely to blame. Our national sins are not those of commission, but of omission. We have paid no attention to the welfare of our tropical neighbors for the purely selfish and ignorant reason that we did not consider the matter worth our while. ... The day has arrived when we have the choice of accepting and profiting by a legitimate opportunity, or of neglecting it and reaping thereby a harvest of misfortune and a loss of national prestige.

Clearly the goal of helping Latin American countries was present, albeit paternalistic.

> The United Fruit Company is more than a corporation. It is an institution, an American institution founded by certain of its citizens and conducted with a broadness of policy and an industrial statesmanship which lift it out of the class of mere money making and profit hunting corporations. It is doing for the American tropics and the American people what the Hudson Bay Company did for the British Empire in the frozen north of Canada. It has awakened the slumbering nations bordering on the Caribbean with the quickening tonic of Yankee enterprise (Adams, 1914:356).

Despite the paternalistic justification, the UFCO's operation in Latin America clearly benefited the US as well as the UFCO. This assessment is important relative

to the claim of imperialistic interests associated with the operation of the UFCO in Costa Rica.

One of the American benefits was the provision of inexpensive tropical fruits to the American public, and thereby providing "the food products demanded to keep pace with the ever-increasing hunger of the city-housed multitudes" (Adams, 1914:356).

In the following passage, Adams (1914:171) abandons any suggestion of the UFCO benefiting Latin American countries in his attack on those who criticize the UFCO's actions in Latin America:

> It is because of such plantations and of the transportation equipment for handling their products that bananas sell for retail in the United States at all seasons of the year at from 10 to 25 cents a dozen. If human stupids [sic] who imagine that an enterprise is wrong because of its size had their way they might compel the United Fruit Company and its competitors to abandon these modern plantations to the ownership and care of lazy Indians, and these stupids would later be rewarded by being compelled to pay 5 cents for a single banana or go without.

The arrangement was also extremely beneficial for the UFCO. The company achieved great corporate success, especially with its Chiquita brand bananas, whose well-known sticker created the first instance of brand-name recognition for a fruit or vegetable. With the provision of inexpensive fruit and intense marketing and advertising, bananas penetrated the American culture, becoming an everyday household product. The most famous example of this is a 1944 Chiquita (UFCO) advertising campaign. A Carmen Miranda-esque half woman, half banana sang the

virtues of the Chiquita Banana on radio and later on television to thousands of potential consumers in the following jingle (Enloe, 1990: 129):

> I'm Chiquita Banana
> And I've come to say
> Bananas have to ripen
> In a certain way.
> When they are fleck'd with brown
> And have a golden hue
> Bananas taste the best
> And are the best for you.
> You can put them in a salad
> You can put them in a pie-aye
> Any way you want to eat them
> It's impossible to beat them.
> But bananas like the climate
> Of the very, very tropical equator.
> So you should never put bananas
> In the refrigerator. No no no no!

The banana had become a staple fruit in the United States, largely because of its relatively low cost. "It is a common thing to see apples and bananas displayed for sale on stands or in stores, with 10 cents asked for the apple and three fine bananas offered for 5 cents" (Adams, 1914:338-9). In 1913, an editorial, entitled "Consider the Banana," was published in the Houston Post (cited in Adams, 1914:338-9):

> How does it happen that the home-grown apple is placed beyond the reach of the average consumer and that the foreign-grown banana has increased in quality and decreased in price? ... It is a farce when apples grown within ten miles of St. Louis or New York sell by weight for ten times the price charged for bananas shipped from Costa Rica or Colombia, South America.

Clearly, for Americans at the time, bananas had become their own. The UFCO transformed the banana into a regular food item in American households. According to Adams (1914:96-7):

> The sensible and logical plan initiated by the United Fruit Company performed for the banana exactly the same service that improved methods of transportation and handling wrought for wheat, corn, and other grain products. It removed the banana from the list of speculative products and elevated it to the grade of a fruit and food staple.

The benefit for the American public was inexpensive fruit year-round; the benefit for the UFCO was high profits. These benefits remain central today.

4. Conclusion

The UFCO and the banana became important features both of Costa Rica and of North America. The UFCO's success in Costa Rica was based on its prominence in development and infrastructure, its vertical integration and breadth, as well as its monopolistic tendencies. The banana industry had strong impact on Costa Rica's development in this period. First, the UFCO and the growth of the banana enclave in Costa Rica resulted in increased development, especially of infrastructure. However, it also led to the transformation of Costa Rica into what came to be known as a 'banana republic', typified by increased dependence on companies such as the UFCO and on the United States. Costa Rica's dependence on the banana industry had consequences that included political-economic instability, deforestation, malaria and Panama disease. Socio-culturally, the UFCO contributed to ethnic conflict and the inhibition of indigenous development patterns. The UFCO also played an important role in the cultural identity of Latin Americans.

Tensions from these negative consequences culminated in the 1934 banana workers' strike. Through the strike, banana workers and the union leaders, supported by the Costa Rican Communist Party, voiced their anger against the UFCO, whose presence was interpreted as imperialistic. Latin American dependency theorists, as well as several historians support this interpretation. However, there were clear benefits for Costa Rica, and there was an aspect of paternalistic altruism behind the American presence in Latin America. Nevertheless, inexpensive bananas for the American public and profits for the UFCO are incontrovertible.

The early history of the Costa Rican banana industry has direct value for the present for several reasons. First, during this period the banana became an important product both in Costa Rica and in North America. In North America, the banana was transformed from an exotic tropical fruit to a staple food product. For Costa Rica, the development of the banana industry represents a fundamental turning point in Costa Rican history. Costa Rica was transformed from a country with few economic opportunities to the most developed in Central America, driven by the export of coffee and bananas. Nevertheless, the political-economic, socio-cultural, and environmental issues set in motion by the banana industry in this period foreshadowed many of the issues and events that will be central to the banana industry and Costa Rica in decades to come.

## Chapter 4: Setting the Stage for Renewed Conflict in the Banana Republic

The previous chapter examined some of the historical aspects of the Costa Rican banana industry. Some of the issues discussed continued for many decades, two of them Costa Rica's dependence on the banana industry, especially the transnationals, as agents of development, and unresolved labour tensions within the banana industry. These important issues foreshadowed many of the conflicts within the banana industry in the late 1980s and 1990s. This chapter opens with a brief discussion of the importance of the banana industry to Costa Rica's development, and then examines the dissolution of the politically charged, powerful unions, and 'solidarismo' which replaced them. The power of the transnationals is clearly evident throughout these sections.

### 1. The Banana Industry and Costa Rica's Development

Costa Rica has approximately 180 banana plantations, covering roughly 50,000 hectares, the vast majority of which are located in the Atlantic province of Limón (CORBANA, 1995-1997). This region is ideal for banana cultivation because of its consistently warm temperatures and high rainfall. The vast majority of the banana plantations are between 100 and 300 hectares in size. Because of the infrastructure required for commercial banana production, plantations smaller than this are not commercially viable, which will be discussed in chapter 7. In addition to conventional banana plantations, Costa Rica has one organic plantation.

In Costa Rica, the banana industry offers the highest paid 'unskilled' work, which contributes to relatively high production costs, compared with other banana-

producing countries. Therefore, rather than competing on the global market for low-cost bananas, Costa Rica's comparative advantage lies in high-quality bananas.

As an employer, a creator of infrastructure, and a source of export capital, the banana industry has strongly affected the development of Costa Rica for the past hundred years. In 1995, the banana industry employed 35,000 workers directly, and approximately 80,000 indirectly (CORBANA, 1995). For 1996 these figures are estimated at 39,525 direct workers and 118,575 indirect workers (COMEX, personal communications). Bananas are produced in Costa Rica's lowlands in both the Atlantic and Pacific coastal regions, which are relatively underdeveloped compared to the Central Valley. With few employment opportunities in these regions, the banana industry is by far the most important employer, especially since they pay the highest wages of all unskilled jobs in Costa Rica. Because of high labour requirements and wages, the banana industry is one important cause of migration from within Costa Rica, and also from neighbouring Nicaragua and Panama.

As earlier examined, banana companies in Costa Rica, especially the transnationals, have created infrastructure, including the railway, roads, electrical lines, telephones, schools and medical clinics. This creation of essential infrastructure has played a strong role in development patterns in Costa Rica. As discussed earlier, this infrastructural role has its roots in the legacy of the United Fruit Company.

When banana transport was transformed from stems by rail to boxes by truck, it became less important to concentrate production in large plantations. New

decentralized production changed the relationship between the plantation and its workers, including the facilities provided. The smaller plantations were less likely to provide medical clinics and schools, for example, relying instead on the public system. Nevertheless, the infrastructural role of the banana plantations continued, with, for example, electrical lines and roads. At finca Calarcá, for instance, several kilometres from the closest town of Bataan, the banana company provided electrical lines to the plantation, which benefited those with houses or businesses adjacent to the lines. Given the rural and underdeveloped nature of the region, even a minor infrastructural role is significant.

The primary contribution of the banana industry to Costa Rica is as a provider of export capital. Bananas and coffee, traditionally the primary sources of foreign capital, have recently been surpassed by tourism, which has boomed over the last decade, especially ecotourism. Bananas remain the second highest source of foreign capital.

In 1996, he value of banana exports was U.S. $581 million, from which export taxes generated US $30 million. Costa Rica has an extremely high level of foreign debt, at U.S. $3,454 million, worth U.S.$987 per capita in this country of only 3.5 million. Given Costa Rica's per capita GNP of U.S. $2,640, foreign currency for debt service is thus very important (1996 figures: CORBANA, 1996; Instituto del Tercer Mundo, 1999; EIU, 1996, 1:11).

All banana-producing countries in Latin America have experienced a long-term battle between the transnationals and the government over the level of export

taxes on bananas. The export tax was first introduced by UPEB (La Unión de Países Exportadores del Banano: The Union of Banana Exporting Countries), founded in 1974, representing Colombia, Costa Rica, Ecuador, Guatemala, Honduras, Nicaragua and Panama. UPEB represents the first multi-governmental intervention in the banana industry. Its regional organization was deemed necessary to support countries challenging an industry dominated by the transnationals (López, 1988). One of the first measures proposed by UPEB was to place a US $1.00 export tax per box of bananas exported.

The transnationals' response was severe as it was predictable. As McCann (1976:214-5) reports:

> United Brands and the other companies quickly and loudly protested ... [and] Ecuador, the world's largest banana exporting country, backed down, leaving Panama, Costa Rica, Honduras and Guatemala to negotiate the best deal they could. All but Panama followed Ecuador's lead and lowered the tax. Panama, however, remained firm. [Eli] Black [the current president, chairman and CEO of United Brands] suspended Panamanian operations and waited. The suspension, which lasted six weeks, caused great hardship to the Panamanian workers and further inflamed the hostility toward the company, ...[Black said that the] taxes 'violated and breached the provisions of existing agreements.' But he also said that the company realized Panama's need for additional revenues, and that he, therefore, intended to negotiate in order to arrive at a reasonable solution. Later that same month, the company announced that it had reached an understanding with Honduras in which a U.S. $0.25 per box tax was established.

In Costa Rica, the transnationals pressured the government to lower the per-box tax, arguing that it was too high for them to remain competitive in the global market. UPEB estimates that lowering this tax in 1974 cost approximately US $50 million in tax revenues for UPEB countries by 1985 (UPEB cited in López, 1988:49).

Then in 1985, again as a result of pressure from the transnationals, export taxes were reduced as part of CORBANA's Banana Development Plan (Plan Fomento Bananero) to encourage the development of new plantations for anticipated exports to the E.U. As the table below indicates, the export value for bananas increased dramatically and tax revenues plummeted.

| | 1985 | 1986 |
|---|---|---|
| **Export value (million $U.S.)** | 149.6 | 184.2 |
| **Total taxes collected (million $U.S.)** | 31.4 | 15.7 |
| **% total taxes of export value** | 21.0 | 8.5 |

*Table compiled from CORBANA sources*

Dependence on the banana industry, therefore, because of its contributions to employment, infrastructure, and foreign exchange, has left Costa Rica vulnerable to industry volatility and to the transnationals.

2. Unresolved Labour Issues: From Unions to Solidarismo

Costa Rican banana unions have a very dynamic history[1]. Over five decades, the banana unions maintained their power, and staged many strikes, resulting in increased wages, improved social conditions, and better collective agreements. The most active unions were those supported by the Communist Party (Partido Vanguardia Popular); however, the workers themselves also had a large degree of governmental support throughout this period.

Costa Rica suffered an economic crisis in the late 1970s and 1980s. Decreased coffee prices and increased oil prices exacerbated problems in an economy

[1] There are very few well-elaborated data on this issue and therefore I rely heavily on interview data for this section. One of my informants, for example, has worked in the banana industry for over 30 years, was active in the Communist banana unions, blacklisted by the transnationals twice, and continues to work at finca Calarcá. See: Roberto, in Appendix 4: Selected Calarcá Worker Profiles and Biographical Material.

struggling with import substitutions and foreign loans for health, education and industrialization. In 1982, Costa Rica's per capita foreign debt was one of the highest in the world. Nevertheless, the IMF and USAID increased loans and grants to Costa Rica, partly because of Costa Rica's strategic location relative to Nicaragua and Panama. The structural adjustments and conditions associated with this aid hit the Costa Rican economy hard. Wages fell, and there were widespread reductions in government spending, food subsidies, and low-cost credit for peasant farmers (Edelman & Kenen, 1989: 191; Rojas Bolaños, 1992).

In 1979, the Frente Sandanista Liberación Nacional toppled the Somoza dictatorship in neighbouring Nicaragua, which created a split in the Costa Rican Communist Party between Manuel Mora's moderates and a more radical faction inspired by the success of the Nicaraguan revolutionaries. Arnoldo Ferretto, the leader of the new radical faction, replaced Mora. The Sandinista victory in Nicaragua led to increased anti-Communism, fueled by media propaganda in Costa Rica.

Fractured leadership in the banana unions echoed the division within the Communist party. Conditions for banana workers in both the Atlantic and Pacific zones had deteriorated. Unions led by Communist radicals emphasized revolutionary ideology, and increased the frequency of strikes, resulting in increased costs of production, uncertainty, and what has been referred to by several of my informants as "chaos" on plantations and within unions (Aguilar, 1989; Fallas, 1995;

Jansen, 1998; Rojas Bolaños, 1992; Abarca Vásquez, 1992; Barrientos Angulo et al., 1983; personal communications).

In 1981, Chiquita Brands International began substituting African Palm (grown for palm oil) for bananas in many of its Pacific plantations. As palm has lower labour requirements, the risk of strikes and "chaos" were also lower, making it more profitable. Many banana plantations were closed or scaled back: banana production in the Pacific zone dropped from 6700 to 5100 hectares in two years, representing a loss of over 1000 jobs (CORBANA, 1992).

Working conditions and economic pressures at both national and local levels led to the 1984 banana workers' 72-day strike, in which two people were killed and hundreds injured. During the strike, Chiquita permanently closed all its plantations in the Pacific zone of Costa Rica. The strike failed badly: workers became disillusioned with the Communist party and the unions, and governmental support was withdrawn. Banana companies purged union officials. The end of the strike therefore marked the end of the Communist Party in Costa Rica, as well as the end of banana unions.

Much debate surrounds the causes and effects of these events. Some analysts argue that low profitability in the Pacific zone was caused by soil degradation. Others contend that plantations in the Pacific zone had lost their advantage in shipping to the West coast of the United States because of increased competition from Asia and Ecuador. Many people in the banana industry support the argument that Chiquita made the unions scapegoats. López (1988), as well as others, takes this

contention one step further, arguing that Chiquita actually undermined its productivity to incite a strike by the most powerful banana union, providing a rationale for closing increasingly unprofitable plantations, and for dealing with its volatile labour force as well. Both of these situations were important factors in preparing to increase production in the Atlantic region for exports to the E.U. (Vandermeer & Perfecto, 1995:8; personal communications). Regardless of the actual causes and effects, banana company management of portray the 1984 strike as an example of unions out of control, and why their dissolution was necessary (Rojas Bolaños, 1992; personal communications).

The dissolution of the unions made way for solidarismo, a concept based on Christian social justice and empowerment that had been slowly expanding since the early 1940s. Solidarismo attempts to replace the conflict model between workers and employers with one of co-operation. Padre Claudio Solano of the Escuela Social Juan XXIII is considered, literally, the Father of solidarismo in Costa Rica.

It must be noted, however, that the Roman Catholic Church does not support solidarismo and the actions of the Escuela Social Juan XXIII. In 1989, Monsignor Alfonso Coto Monge and the Clergy of the Vicarage of Limón published a Pastoral Letter titled "On the Uncontrolled Expansion of the Banana Industry." Documenting the negative consequences of the banana industry on social life, the environment, and on the pastorate activities in the region, the letter disassociated the Church from the Escuela Social Juan XXIII, and warned against "being fooled by the pseudo-

Christian message presented by Solidarismo" (Foro Emaús website). The letter continues (on the Foro Emaús website):

> We must point out that that the work of labor promotion carried out by the Social School Juan XXIII (Promoter of Solidarismo), is not linked to the pastorate work carried out by the Apostolic Vicarage of Limón, according to its Global Plan, and therefore its task does not have in this particular Church an ecclesiastic character.

Solidarista associations comprise both management and workers, although solidarismo is criticized for being overly management friendly. Severance pay may offer an example that validates this criticism. Both workers and management pay into a fund that gives a worker severance pay upon termination of employment. However, under solidarismo, the company's share has decreased: the company formerly paid 7%, which has been reduced to 5%, which must be matched by 5% from the workers themselves. So although the workers receive a net increase in severance pay, 7% to 10%, half of this amount is the worker's own money (Rojas Bolaños in Edelman & Kenen, 1989; Barrientos Angulo et al. 1983; various documents from the Escuela Social Juan XXIII, personal communications).

Arguing for solidarismo, Padre Solano and other proponents hold that while the unions attempted only to address economic issues, solidarismo has the potential to address all aspects of employees' lives. On the other hand, Vandermeer and Perfecto (1995:8) argue that "solidarista dogma outlaws strikes, does not recognize the right of workers to collectively bargain, and seeks to attract workers with frivolous benefits such as clubhouses and soccer fields." There is, however, no one platform on which solidarismo rests; this is left for the solidarista association to

organize. Not surprisingly, most managers and those working for the industry associations give glowing reports of solidarismo in the banana industry (Rojas Bolaños in Edelman & Kenen, 1989; Barrientos Angulo et al. 1983; various documents from the Escuela Social Juan XXIII, personal communications).

The situation at finca Calarcá, where I did my fieldwork, however, was not cause for glowing reports. Although officially under solidarismo, Calarcá had no active committee; the only discernible evidence of solidarismo was a sign proclaiming the plantation's participation in solidarismo. The issues surrounding worker recourse and solidarismo at Calarcá are discussed in chapter 8.

Calarcá is but one plantation, and it is difficult to tell exactly how typical it is regarding solidarismo, although the workers there said it was very typical of the plantations at which they had worked. Not surprisingly, a spokesperson associated with the industry estimated that only about 10% of solidarista associations were inactive; Padre Solano placed this figure at 2%, of which, presumably, Calarcá was one. It is impossible to reconcile these opposing positions without further research. However, those in power present solidarismo as a win-win solution to a difficult past, and there is great reluctance to open it to scrutiny.

It is fairly clear that in the years leading up to their dissolution, the banana unions did not represent most banana workers. Nevertheless, they were extremely powerful within the banana industry. Thus the replacement of the unions by solidarismo eliminated one of the only power bases outside transnational and governmental control. The replacement process received massive funding from the

Association for Free Labor Development, the international wing of the AFL-CIO, which according to Vandermeer and Perfecto (1995:8), has long been suspected of ties to the CIA. Regardless of the effectiveness of the unions before their dissolution, the advent of solidarismo leaves little room for the development of any other popular or syndicalist employee association. The development of solidarismo is thus consistent with a broader neo-liberal strategy of primacy of the market.

In late 1997 and early 1998, due to pressure from U.K.-based groups World Development Movement and Banana Link, del Monte signed an agreement allowing banana workers on its Costa Rican plantations to organize and join unions. An agreement was also signed between del Monte and the independent Costa Rican trades union, SITRAP (World Development Movement, 1998). It is not clear whether these agreements are isolated events, or the beginning of a trend. In any case, further evaluation is required to determine to what extent solidarismo lives up to the vision presented by Padre Solano and other managers, or to what extent workers' rights have been sacrificed for the sake of corporate interests.

3. Conclusion

The banana industry has made significant contributions to Costa Rican development as employer, as a creator of infrastructure, and as a source of export capital. Because of industry dominance, the transnationals have taken a primary role in many aspects of national development. However, the banana transnationals have not been without their own agendas, seen in the transnationals' important role

in undermining the development of an effective system of labour relations through the dissolution of the unions and the introduction of solidarismo.

After the 1984 banana workers strike, the powerful Communist banana unions were dissolved and replaced with solidarismo, ostensibly a new, improved system of worker-employer relations. However, decreased profitability in Pacific plantations, the financial support of the AFL-CIO for solidarismo, and the role of the transnationals together suggest that there was far more afoot than simply "out-of-control Communist unions." In fact, these conditions were necessary to address increased production in the Atlantic with the advent of increased exports to Europe. As a form of worker organization, solidarismo appears tenuous, with the benefits clearly weighed towards management. Solidarismo abrogates unionism and the possibility of a better system of workers' rights.

Costa Rica's dependence on the banana industry and the transnationals, as well as the unresolved issues relating to labour relations foreshadowed the events and conflicts within the banana industry in the late 1980s and 1990s. These issues are examined in the following chapter.

## Chapter 5: The Banana Wars:

## The International Relations of Bananas (1985-1999)

This chapter examines some of the political-economic dynamics of the banana industry. Of particular relevance is the dispute of the 1990s among Latin America, Caribbean countries, the U.S., and Chiquita Brands International with respect to the import regime with the E.U. Once the U.S. became involved, this dispute was labeled 'the banana wars'. These so-called 'wars' demonstrate the power of transnational corporations at both national and international levels: Chiquita played a central role as instigator. The dispute also demonstrates differences between national and international levels in the functions of the banana industry.

The first section consists of a brief overview of the international banana industry and of the role of European protectionism. Then follows an examination of speculation within the banana industry in anticipation of increased access to the European market. Costa Rica and Chiquita are of particular interest in this matter, as both were involved in what I term 'the Banana Blunder', when the creation of the E.U. failed to decrease protectionism and to increase access to the E.U. market.

The remainder of the chapter examines responses to and consequences of the E.U. banana accord, and discusses tactics used by Chiquita and the U.S., the banana wars, and the legal challenges to the E.U. import regimes. These discussions clearly demonstrate that the banana wars were not merely about bananas, but also about power and money. Further, the discussions reveal that the transnationals, and particularly Chiquita, have enormous power, not only within the banana industry,

but also within the U.S. government and justice system, and the international political-economic context. Although the banana wars primarily concerned the financial and power struggles inside Chiquita, the U.S. political system, and the E.U., they extended beyond these primary areas. Therefore, this discussion is followed by an examination of two additional theaters of the banana wars: Costa Rica, and the U.S. media and justice systems.

The final section examines the aftermath of the banana wars, for although they are technically over, many issues remain unresolved. These matters and some consequences of the banana wars will be discussed. In the end, it will be shown that the underdeveloped banana-producing countries, such as Costa Rica and the smaller African-Caribbean-Pacific (ACP) nations are most vulnerable to the negative consequences of events driven by high finance and the transnationals in the banana wars. A timeline chart for the events addressed in this chapter is presented at the end of this chapter.

1. The Creation of the E.U. and Realignment of Trade Policies

Brazil and India are the largest producers of bananas worldwide, followed by the Philippines, Ecuador and Costa Rica. However, Brazil, India, and the Philippines produce bananas almost exclusively for internal consumption. Of those countries exporting bananas, Costa Rica is second, following Ecuador, whose exports roughly double those of Costa Rica. Costa Rican export bananas represent 15% of the world market (Soto, 1992; López, 1988). Most Central American countries produce bananas, as do the eastern Caribbean islands and Jamaica.

The largest export markets for bananas are the U.S. and the E.U. The U.S. imports bananas primarily from Latin America, where American-based transnationals dominate. Roughly 50% of Costa Rican bananas are exported via ports in the U.S. and roughly 50% via European ports, led by Germany, Belgium and Italy, which combined, took approximately 35% in 1996 (CORBANA, 1996).

In the E.U., American banana transnationals supplied more than 90% of the European market (1994). The remainder came from the A.C.P. (Africa, Caribbean and Pacific) from former European colonies and protectorates. The British market is supplied by the Windward Islands (St. Lucia, Grenada, St. Vincent and Dominica) and Jamaica. France imports bananas from its overseas territories (Martinique and Guadeloupe), and from Cameroon and Ivory Coast, and Spain from the Canary Islands. With no remaining colonial ties, Germany imports Latin American bananas, which were duty-free until the creation of the European Union and the Banana Accord (Sexton, 1997).

Although Caribbean bananas represent only 3% of the European market, this figure is significant because in the Caribbean, the banana industry employs approximately half the rural population, based on small family farms organized into co-ops, and accounts for more than half of export earnings. By contrast, banana production in the rest of Latin America is dominated by U.S. transnationals, led by Standard Fruit (Dole) and Chiquita Brands International. The leading E.U. companies operating in the Caribbean are GEEST of Britain and Fyffes of Ireland (Sexton, 1997; Welsh, 1996; Zaretsky, 1996).

This 3% figure is also significant because A.C.P. bananas receive preferential market access to Europe under Protocol Five of the Lomé Convention, a negotiated multilateral Treaty between the European Union and 70 A.C.P. countries. The agreement offers duty-free access from A.C.P. countries into Europe for a range of commodities such as coffee, bananas, cotton, cocoa, tea and wood products. The Lomé convention, although renewed several times, is, as will be discussed further, threatened by intensified global free trade measures such as the W.T.O. (Welsh, 1996; Zaretsky, 1996; Sexton, 1997, Ransom, 1999).

The creation of the E.U. necessitated harmonizing national trade policies and regimes. However, European countries were divided with respect to support for preferential treatment of A.C.P. bananas. One faction, led by France and Britain (and later joined by Spain, Portugal and Greece) argued for preferential treatment of above-world-market prices because of obligations to former colonies. However, the most forceful proponents of this position were those countries with significant banana production within their national or colonial territories.

On the other side was Germany, which had been stripped of its colonies after World War I. As one of the largest importers of Latin American bananas, who in 1996 imported 11% of Costa Rica's production (CORBANA, 1996), Germany argued in support of the larger, cheaper Latin American bananas. For decades, Germany had contested France's claim that bananas grown in Martinique and Guadeloupe were a 'European' fruit. The inclusion of Spain, Portugal, and Greece in the E.U. brought support for preferential treatment, as bananas produced in the Canary

Islands, Madeira, the Azores, Crete and the Greek mainland are undisputedly European. Not surprisingly, U.S. transnationals and Latin American countries, both of which benefit from exports to Europe and specifically Germany, supported the German position (Welsh, 1996; Zaretsky, 1996; Sexton, 1997, Ransom, 1999).

As the integration and harmonization associated with the creation of the E.U. necessitated one unified import regime, change was clearly both necessary and imminent with respect to the banana industry and the E.U. Further, the protectionism associated with the previous import regime countered an overwhelming international context of trade liberalization. Thus, the battle lines were drawn: Germany versus the French camp; U.S. transnationals and Latin American producers versus ACP co-ops; trade liberalization versus protectionism.

2. Speculative Expansion in the Banana Industry

Latin American banana producers faced a difficult decision with high stakes. Abandoning the E.U. protectionist import regime would result in significantly increased accessibility to the E.U. market, through displacement of the Caribbean co-ops. This change would be lucrative, not only because of the volume of exports anticipated, but also because bananas in the E.U. fetch a significantly higher price than in North America. Further, E.U. access would facilitate an entrée into the former Communist countries in Eastern Europe, which, relatively speaking, were virgin territory for banana exports. Difficulties arose, however, because new banana plantations require approximately five years to be productive. To accommodate the anticipated demand, new plantations needed to be developed several years prior to

the opening of this new market, and therefore producers could not afford to wait for the E.U. decision to begin developing new plantations, especially given the degree of competition within the banana industry.

The majority view in Latin America held that the creation of the E.U. would result in a single import regime, without previous levels of protectionism for former colonies and protectorates (personal communications). In Chiquita's 1991 annual report, president Carl Lindner, wrote with great optimism: "Our leadership in the European marketplace enables us to continue our growth in the high-potential markets of Eastern Europe, and to benefit from the transition to a single market economy in the European Community" (cited in McWhirter & Gallagher, May 3, 1998).

As a result, from the early 1980s until the mid-1990s the banana industry in Latin America was driven by speculation and greed. Costa Rica dramatically increased banana production, from 44 million boxes in 1985, to 74 million in 1990, to 116 million in 1998. Increased production occurred in all three of the transnationals (Dole, Chiquita, and del Monte), and also with the independent plantations. In addition, many Colombian plantation owners came to Costa Rica to develop plantations, speculating that production conditions and access to export quotas in Costa Rica would be preferable to those in Colombia.

| million boxes of 18.14 kg. | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Boxes Exported** | 44.3 | 48.6 | 52.0 | 56.6 | 67.5 | 74.1 | 80.9 | 91.4 | 101 | 103 | 112 | 107 |
| **Dole (Standard Fruit)** | 15.5 | 18.3 | 21.1 | 21.8 | 24.4 | 26.7 | 26.4 | 27.9 | 28.0 | 26.3 | 32.7 | 31.8 |
| **% of total boxes** | 35.0 | 37.7 | 40.6 | 38.5 | 36.1 | 36.0 | 32.6 | 30.5 | 27.7 | 25.5 | 29.2 | 29.8 |
| **del Monte (Bandeco)** | 17.8 | 20.0 | 20.9 | 22.7 | 25.5 | 24.5 | 25.7 | 26.2 | 22.2 | 20.1 | 23.8 | 28.4 |
| **% of total boxes** | 40.2 | 41.2 | 40.2 | 40.1 | 37.8 | 33.1 | 31.8 | 28.7 | 22.0 | 19.5 | 21.2 | 26.6 |
| **Chiquita (Cobal + Chiriquí Land Co.)** | 8.8 | 9.4 | 9.0 | 9.2 | 9.8 | 12.7 | 12.9 | 15.0 | 19.7 | 20.0 | 20.6 | 20.0 |
| **% of total boxes** | 19.9 | 19.3 | 17.3 | 16.3 | 14.5 | 17.1 | 15.9 | 16.4 | 19.5 | 19.4 | 18.4 | 18.8 |

*table compiled from CORBANA sources*

This drastic, rapid increase in banana production required support and inputs of various types. Most importantly, the massive increase in production entailed the development of new plantations, because those currently producing could not attain the production goals. The new plantations were developed almost exclusively in Costa Rica's Atlantic zone in order to facilitate export to anticipated European markets. In the traditional production regions near the coast and in the Talamanca area, development was expanded and production intensified. Production was also increased in the Río Frío region, which previously had been considered peripheral. In addition, plantations were extended north into the Sarapiquí region, an area known for biological diversity and nature reserves.

This substantial increase in production also required the cooperation of the banana workers themselves. This requisite was no insignificant matter, given that during the 1980s the Costa Rican banana industry was entrenched in difficult labour and union struggles. As discussed in chapter 3, the advent of solidarismo as the primary mode of labour relations clearly facilitated the industry changes required

for increased banana production. Don Héctor, the managing owner of finca Calarcá explains (translated):

> The change from unionism to solidarismo has been enormously advantageous for business. Because even though unionism isn't bad: in general terms unionism is good, if well-managed, well-oriented. Solidarismo is like giving unionism a new face. ... I believe that the name was changed, the image was changed, and also it was imprinted with a philosophy which better protects the company, because unions in Colombia, and here [in Costa Rica] at the beginning, had the character of being the enemy of the company.

Finally, massive amounts of capital were needed. Costa Rica's Banana Development Plan (Plan Fomento Bananero) was designed partially to address this concern. Starting in 1985, financial support and huge loans were provided for plantation development by national producers and marketing companies, financed by the National Bank of Costa Rica, and CORBANA (at that time, ASBANA).

McWhirter and Gallagher (May 3, 1998) report that Chiquita, under Carl Lindner's leadership, made huge capital investments during this period. In 1990, Chiquita reported long-term debt of U.S. $494.1 million. In 1991, the figure jumped to $1.23 billion, an increase of more than 135 percent in one year. The next year it climbed to $1.41 billion. According to Clyde Stephens, who retired as chief of Chiquita's Banana Research division in 1991 after decades with the company, much of this money was used to buy and lease ships and expand plantations in Central America. Stephens (cited in McWhirter & Gallagher, May 3, 1998) explained:

> They invested heavily in ships because they said, 'Hey, we're going to Europe and we're going to break that European market wide open. And we're going to Eastern Europe. Those bankrupt countries are going to be in the money.' I thought this was crazy, but I was ordered

from the top to go along with it. ...And they went ahead and just spent untold millions of dollars in expansion.

3. The E.U. Announces a Limited Import Regime

In 1992, the E.U. announced its new banana import regime. Contrary to transnational and Latin American expectations, there was no loosening of the E.U. market for bananas. Although there would be no quotas *per se*, the E.U. would provide export certificates with a preference for companies that marketed A.C.P. bananas. The Caribbean producers, which had been protected by the Lomé Convention, would be granted duty-free quotas to their maximum shipments up to 1990. In addition, the proposed Banana Accord included a combination of tariffs and quotas. Two million metric tonnes of so-called 'dollar' bananas from Latin America would be allowed into the E.U. at a tariff level of 20%. Any imports above that level would face a stiff 170% tariff.

Clearly, the E.U. decision was a blow to the U.S. transnationals, Latin American banana producers, and to Germany. Germany, outvoted by Qualified Majority Voting, was outraged because they were effectively forced to import the more expensive and smaller bananas from the Caribbean. As a result, Germany tried to nullify the E.U. banana regime in the European Court of Justice, but failed because the court claimed that E.U. market integration was more important than nationalistic preferences (Welsh, 1996; Zaretsky, 1996).

As a result of the E.U. ruling, Costa Rica abandoned more than 1000 hectares of banana lands: it was estimated that the drop in banana production could directly affect 40,000 Costa Ricans. Nevertheless, Chiquita continued with a U.S. $38 million

project to develop new plantations in the Caribbean region of Costa Rica. To mitigate anticipated lower demands and higher world prices, the Costa Rican government reduced the banana tax from U.S. $0.40 to U.S. $0.30/box and replaced its high productivity bonus with a universal production incentive of U.S. $0.15/box. In addition, state banks were instructed to provide producers with additional lines of credit in dollars rather than domestic currency loans (EIU, 1993, 2:16, 4:17).

There were two Latin American responses to the E.U., one led by Guatemala, and the other by Costa Rica. Guatemala filed complaints to the GATT about the unfair protectionist measures of the E.U. banana regime. Ecuador and the U.S., which claimed that the E.U. banana regime distorted fair trade policies under GATT principles, supported this approach. The E.U. applied for exemption of the banana regime in GATT. Then, with promises of bilateral talks, the U.S. dropped its GATT complaint, but Guatemala pursued the issue.

Costa Rica's initial response to the new regime was to dismiss an offer of U.S. $74 million in compensation as inadequate for what would amount to a 20% cut in exports to the E.U. because of the second tier of tariffs (EIU, 1993, 1:6-7, 13; La Nación, 18/4/95, 29/9/95, personal communications). However, in contrast to Guatemala's and Germany's antagonistic approaches, Costa Rica and Colombia began negotiating with the E.U. on behalf of Latin American banana producers. In December 1993, they negotiated a new agreement, a compromise designed to cut some of the losses that would be incurred by Latin American banana producers. In exchange for not making a challenge at GATT, the E.U. was to raise its total annual

quota, and in addition, quotas for each country were to be set. Costa Rica and Colombia would receive the highest quotas, followed by Ecuador. In addition, 70% of each country's quota would be distributed by the exporting nations, with only 30% in the hands of the European importers. As the world's largest exporter of bananas, Ecuador was outraged with its third-place ranking (EIU, 1994, 1:8). In the end, the agreement was not accepted, due to dissension among Latin American producers.

This dissension further divided the two camps of Latin Americans. The Guatemalan camp, which included Panama, Ecuador and Mexico, was very dissatisfied with the previous proposal, and wanted a completely new one. On the other hand, Costa Rica and Colombia, the big winners in the previous proposal, presented a new submission that was nothing more than a slight variation of the previous one. Neither camp would support the other's proposal (La Nación, 11/7/95).

In March 1994, the E.U. responded with a final offer, known as the Framework Agreement, which was extended only to Costa Rica, Venezuela, Colombia and Nicaragua. Guatemala, still pursuing its challenge at GATT, was excluded from the offer. The quota was raised from 2 million tonnes to 2.1 million tonnes in 1994 and to 2.2 million tonnes in 1995. Costa Rica was given 23.4%, the largest share of the quota; Colombia's share was 21%, Nicaragua's 2%, and Venezuela's 2%. Also, there was a reduction of the tariff from ECU 100/tonne to 75/tonne. Further, 70% of each country's quota would be distributed by the

exporting nations. The exporting countries' control over export certificates would later become the basis of a legal challenge by Chiquita. These favourable trade conditions were extended to Costa Rica, Venezuela, Colombia and Nicaragua in exchange for their agreement not to file formal complaints against the E.U. (EIU, 1994, 1:8; 2:8-9; 3:16; 1997, 2:10; La Nación, 18/4/95, 20/9/95, 29/9/95; La Prensa Libre, 28/7/95; La República, 8/10/95). It should be noted that the quotas of the Framework Agreement were altered in 1996 to reflect the incorporation of Sweden, Finland and Austria into the E.U., but this did not result in an increase in exports because were previously on a free market (EIU, 1996, 3:28).

Meanwhile, the Guatemalan-led faction (Guatemala, Ecuador, Panama and Mexico) claimed that the Latin Americans had sold out with the Framework Agreement, instead of uniting with them in an attempt to nullify the E.U. banana regime through GATT, and the upcoming W.T.O. In addition, the European Court of Justice found, in a non-binding decision, that the E.U.'s policy did not technically violate E.U. law, but that it restricted supplies more than was necessary to protect A.C.P. and E.U. producers. Nonetheless, the Guatemalan-led camp remained committed to challenging the agreements through GATT. These challenges were later transferred to the newly formed W.T.O. (EIU, 1994, 3:7).

Despite the divisions resulting from the banana accord and the Framework Agreement, Latin American banana producers managed, quite unexpectedly, to restructure the Union of Banana Exporting Countries (UPEB) in January 1995 (EIU, 1994, 4:10). The UPEB (La Unión de Países Exportadores de Banano), founded in

1974, is an international organization of Latin American banana-producing nations. Each UPEB member country has a national organization. In Costa Rica it was ASBANA, the predecessor of CORBANA. UPEB, designed to challenge the power of the transnationals at the international level, has not been very successful. Until its restructuring in 1995, UPEB was on the brink of collapse because of failure to pay dues, as well as internal conflicts regarding export quotas to the E.U. (La República, 28/10/95).

4. Chiquita Brings in the Big Guns

Chiquita Brands International had much to lose with the new E.U. banana import regime. Stephen Warshaw, Chiquita's current president stated:

> The E.U.'s illegal banana regime is the cause of the company's poor financial results since 1992. It would be absurd to conclude otherwise... It is well accepted that the E.U.'s banana regime was specifically designed to expropriate market share from U.S. banana interests to benefit European multinationals and other interests within the European market ... Our stock price declined precipitously, and our industry has been substantially damaged (cited in Barlett & Steele, 2000:28).

In 1994, Chiquita filed a Section 301 Petition with the United States Trade Representative (USTR), arguing that both the E.U. agreement and the Framework Agreement were not consistent with the GATT because they unfairly excluded Chiquita, thereby placing it at a disadvantage (La Nación, 18/4/95, 29/9/95; Zaretsky, 1996).

However, the position of the E.U. and representatives of Eastern Caribbean nations was that no A.C.P. producer should be placed in a less favorable situation than in the past regarding access to traditional markets. They argued that this was

the basis for the Lomé Convention, which had been granted a waiver to the GATT. The E.U. held that preferential market access would be meaningless without licenses to ensure that Caribbean bananas reach those markets. Further, any change to this practice could be disastrous to Caribbean countries, which depend heavily on banana exports. As a result, the E.U. perceived the section 301 Petition as overly aggressive, and this response marked the beginning of offensive U.S. diplomatic measures (Zaretsky, 1996; EIU, 1995, 3:6).

The dispute escalated, and became labeled the 'banana wars' when Chiquita brought in the U.S. to champion its cause. On one front, U.S. trade representative Mickey Kantor vociferously backed Chiquita's USTR complaint, claiming discrimination against U.S. banana marketing and distribution companies. He condemned the banana settlement on the grounds that it would allow the governments of the four countries that had signed the Framework Agreement (Costa Rica, Colombia, Nicaragua and Venezuela) to impose their own conditions on U.S. banana companies. Under Section 301, Kantor was authorized to administer penalties against countries unfairly limiting U.S. exports (EIU, 1995, 3:6; La Nación, 6/1/96).

On another front was the World Trade Organization (WTO), created in January, 1995. One of the WTO's main objectives is a high degree of trade liberalization. To this end, WTO panels investigate and resolve trade disputes in which a country claims non-conformance to trade standards. In 1995, the case

against the E.U. became the first to be brought by the U.S. before the newly created WTO (EIU, 1996, 1:7; 1997, 3:8-9; Ransom, 1999).

On the surface, Americans pursuing trade sanctions against the E.U. over bananas seems rather odd. After all, the U.S. does not export bananas, and only 7,000 of Chiquita's 45,000 employees are in the U.S. (Sexton, 1997). According to Alvaro Gonzalez de Cossio, Brussels delegate for ASPROCAN (the Association for Banana Plantations on the Canary Islands), "The government of the United States has itself invested a lot of time, people and money to this conflict when there is no domestic export to the European Union so this is, from our point of view, a little bit strange" (cited in McWhirter & Gallagher, 1998: May 3). So why did the U.S. declare what would later be referred to as the Banana Wars? The simple answer is power and money.

a) The Lindner-Chiquita Financial Connection

The story of the Banana Wars revolves around Carl Lindner, the man at the helm of Chiquita. Since 1982, Lindner has been a certified member of the *Forbes* list of the 400 richest Americans, with a personal fortune estimated at U.S. $800 million. Lindner's corporate agglomeration includes American Financial Group, Inc., (an insurance business with an annual revenue of $4 billion), Provident Financial Group, Inc., ($8 billion), and Chiquita Brands International. Lindner, his son Keith (also a Chiquita executive) and Lindner's companies own 40% of the stock of Chiquita, which is based in Cincinnati, Ohio (Barlett & Steele, 2000).

Lindner is well known for his wealth, his leadership of Chiquita, and his massive political donations. In addition to contributions to individual candidates, Lindner, his relatives and his companies gave a total of $3,164,460 in 'soft money' donations to Republican and Democratic national fund-raising committees from 1988 through the first six months of 1997 (McWhirter & Gallagher, 1998: May 3; Barlett & Steele, 2000). Lindner is a registered Republican, but according to Ann McBride, president of Common Cause, a non-profit group for finance reform:

> Although he has given more to Republicans, ... Mr. Lindner was one of the biggest soft money givers and one of the pioneers in double giving ... And double giving is the clearest evidence that this money is not about elections, it's about buying influence... The way Carl Lindner has given has been to give to both parties so that no matter who wins, he'll have a place at the table (cited in McWhirter & Gallagher, 1998: May 3).

Unlike the restricted contributions to individual candidates for national office, soft money donations can be given in unlimited amounts to political committees. These donations have recently become a focal point in the debate about U.S. campaign finance reform.

According to Gary Ruskin of the Congressional Accountability Project, a Washington, D.C.-based interest group that tracks financial contributions in Congress, Mr. Lindner's name appears repeatedly when reviewing campaign finance filings: "The guy is fascinating, he shows up all the time." Lindner also comes up in U.S. national discussions about campaign finance reform. The Senate Governmental Affairs Committee, planning hearings on campaign finance reform, issued subpoenas to Lindner and Chiquita for documents regarding campaign

contributions. But the hearings were later dropped when the chairman announced that his committee would not pursue the issue because of lack of cooperation from other politicians and lobbyists. The majority of these committee members had received direct contributions from Lindner (McWhirter & Gallagher, 1998: May 3).

The Lindner/Chiquita financial connection covers both U.S. political parties via a number of different channels. For example, according to The Center for Public Integrity, a U.S. public interest group, Lindner is considered one of the major 'career patrons' of Senator Bob Dole, in addition to giving campaign contributions and providing use of the corporate jet in 1996. Also, during the 1997-8 election cycle, Lindner gave money to the National Republican Senatorial Committee as well as the Democratic Senatorial Campaign Committee. Lindner, his family and officials of his companies also gave hundreds of thousands of dollars to the Clinton - Gore campaign, the Democratic National Committee, the 'DNC Services Corporation' and other soft money groups. During the 1997-8 election cycle, Lindner's American Financial Group gave $150,000 in soft money to various committees, making the company the largest soft money contributor in Ohio. The second largest soft money contributor in the state is Lindner himself, with $125,000 in donations.

| U.S. Party Donations: | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|
| Republicans: | $37 K | $56 K | $220K | $446K | $519.5K | $736 K | $459K | $1132.5K | $555K |
| Democrats: | $4 K | $11.5K | $264K | $254K | $132 K | $114.5K | $116K | $217 K | $260K |
| Other donations & financial connections | | E.U. Banana Accord comes into effect | | $250K to Democratic National Committee | Lindner on White House's list of top 10 donors | $500K to Clinton | 1997/8 U.S. election: | | |
| | | | 1993/4 U.S. election: second largest contributors of soft money for both political parties | | | Corporate jet to Dole and Lindner/ Chiquita support Dole's presidential bid | Chiquita is the #1 soft money contributor in Ohio, with $150K in donations, with Lindner, at #2 with $125K. | | |
| | | | | | | Chiquita hires lobbying group Public Strategies Washington, Inc., for $279K | Lindner, his relatives and company officials gave thousands to various candidates and political action committees | | |

*Sources for Table include: Ransom, 1999; Barlett & Steele, 2000; McWhirter & Gallagher, 1998; Zaretsky, 1996; Sexton, 1997; La Nación*

Chiquita also hired the influential lobby group Public Strategies Washington, Inc., paying it $279,402.08 in 1996 alone (McWhirter & Gallagher, 1998: May 3; Ransom, 1999; Barlett & Steele, 2000).

According to E. Courtenay Rattray, executive director of the Jamaican banana exporting company Jamco, "Carl Lindner and Chiquita are giving hundreds of thousands of dollars to both Democrats and Republicans and are getting people to support them. This is just money politics" (cited in McWhirter & Gallagher, 1998: May 3).

b) Chiquita Mobilizes U.S. Support

The circumstantial connections between Lindner and Chiquita and the Banana Wars go well beyond large donations to political figures and parties. In fact, direct communications and donations originating with Lindner and Chiquita coincide with key events in the Banana Wars. According to Barlett & Steele (2000:26):

> The short version of the money story is this: Europe first offended Lindner when it imposed import restrictions on bananas from Latin America, where his plantations are located. Lindner then contributed a quarter of a million dollars to the Democrats. Gore called and asked for more money. Lindner gave it. And then some more. So much more that Lindner had a dinner in the White House, attended a coffee klatch there for the truly generous and slept in the Lincoln Bedroom. Along the way, he periodically met with then U.S. Trade Representative Mickey Kantor and his staff, the officials who ultimately sought the trade sanctions intended to punish the Europeans and force them to give Lindner what he wanted.

Correspondence indicates that in 1994, Chiquita began pressuring the White House and members of Congress to take on the European banana issue. In October 1994, Vice President Gore called Lindner while the White House was considering diplomatic action against the E.U. White House records show that in the weeks following this call, Lindner companies and associates donated $250,000 to the Democratic National Committee (Gallagher & McWhirter, 1998: May 3; Barlett & Steele, 2000:26).

There was also direct communication and meetings with Chiquita executives and U.S. Trade Representative Mickey Kantor. In one letter, dated July 19, 1995, Carl and Keith Lindner wrote to Kantor that they hoped to meet soon to discuss

"our larger case strategy and to discuss our mutual efforts in greater detail" (cited in McWhirter & Gallagher, 1998: May 3). They held meetings before and after the letter. Various U.S. Senators also met with Mr. Kantor on Chiquita's behalf. Chiquita provided policy position papers on the banana issue for U.S. embassy staff around the world, and further, it has been demonstrated that Carolyn Gleason, Chiquita's trade attorney, and a registered lobbyist and key liaison to the Clinton administration, wrote legislation on the banana issue for the trade office to submit to the Federal Register (Barlett & Steele, 2000; McWhirter & Gallagher, 1998: May 3)

Chiquita figures prominently in formulating U.S. banana trade policy. At the U.N.'s Food and Agriculture Organization (FAO) banana conference in Rome in 1997, the U.S. delegation consisted of three U.S. trade diplomats and four other people listed as advisers, who are chosen by individual governments. These advisers were the president of European Offices of Chiquita, Chiquita's assistant general counsel, Chiquita's trade attorney and lobbyist, and the head of a banana trade group that represents the entire industry. No one from del Monte or Dole was represented on the U.S. delegation (McWhirter & Gallagher, 1998: May 3; Ransom, 1999).

It seems hardly surprising that Chiquita connections are also strong with respect to the WTO challenge. Chiquita had been pressuring the White House to respond to the banana issue. Then, shortly after Mickey Kantor took the case to the WTO, Carl Lindner and other Chiquita executives donated hundreds of thousands of dollars to numerous state Democratic parties (McWhirter & Gallagher, 1998: May

3; Ransom, 1999; Barlett & Steele, 2000;). Interestingly, Dole and del Monte, the two other large U.S. banana producers, did not file requests with the White House: in fact, Dole proposed a compromise in 1995 to prevent the conflict from escalating to the level of the WTO, but it was refused. According to Richard Bernal, the Jamaican Ambassador to Washington, D.C., "There was no reason for them to go to the WTO. ... We were given assurances by Ambassador Kantor that the U.S. wanted to resolve this. It was a breach of faith with the Caribbean" (cited in McWhirter & Gallagher, 1998: May 3). In addition, the Council on Hemispheric Affairs, a non-profit research institute focusing on Latin American issues, demanded an investigation by the Federal Election Commission because Lindner had "bought himself a U.S. foreign policy" (cited in McWhirter & Gallagher, 1998: May 3).

c) Resolution by the World Trade Organization.

In April 1997, the dispute panel of the WTO upheld the complaints against the E.U.'s import quota system and the implementation of the Framework Agreement with Colombia, Venezuela, Costa Rica and Nicaragua. The panel did not reject quota systems *per se*, but ruled that the negotiation and allocation of quotas and its licensing procedures were discriminatory. It also ruled against the privileged access to import licenses that the E.U. system gives certain companies, based on their country of origin (EIU, 1997, 2:10; Banana Trade News Bulletin, July 1997). In June, the E.U. appealed this decision, arguing for continuing protection of A.C.P. bananas in order to prevent the economic devastation of the producing

countries, which depend on privileged access of banana exports to the E.U. (EIU, 1997, 2:10, 3:9, 4:29-30; Sexton, 1997; Welsh, 1996; Zaretsky, 1996).

In April 1999, the WTO panel presented its final ruling, that the E.U. banana import regime which protected ACP banana producers, and the Framework Agreement which included special quotas for some Latin American countries, contravened the trade organization's rules (EIU, 1999, 3:19-20; 4:19-20).

Following the WTO ruling, the U.S. imposed almost U.S. $200 million in tariffs, retroactive to the date the U.S. declared a trade war with Europe. The tariffs represented the largest penalty associated with a WTO in a trade dispute. According to Barlett and Steele (2000), the products selected for tariffs include German coffee makers, French luggage and Italian cheese, none of them major imports, which would spark further retaliation by the E.U., but those which affect only relatively minor European companies. They argue that this sanction has threatened the viability of several small American companies whose business relies on these selected European imports. A U.S. trade official said the tariffs would "evaporate overnight" if Europe would comply with international rules.

Lindner's response to the WTO ruling was that "The WTO decision condemns each and every aspect of the E.U.'s regime about which we have complained." Jay Ziegler, a U.S. Trade Representative spokesman, stated "We view this as a substantial victory. ... It shows the [World Trade Organization] system has teeth" (All cited in Brothers, 1999: Apr. 7).

5. Other Theaters of War

As described in the previous section, the tools of war employed in the banana wars were diverse, ranging from the financial, to the political and the social. These tools also included the legitimate, the illegitimate, the overt, and the subtle. Neither were these wars just waged against the E.U.: two additional theaters of war, Costa Rica, and the U.S. media and justice system, are discussed in the following section. Just as in the dispute with the E.U., Chiquita Brand International's power can be seen both directly and as filtered through the U.S. political system.

a) Costa Rica

Chiquita targeted not only the E.U., but also individual countries that had signed the Framework Agreement, including Costa Rica. In 1995, Chiquita challenged the implementation of the banana accord on two bases. First, the Costa Rican government was charged through the U.S. Trade Representative (USTR) with unfair trading practices under U.S. Trade Law 301. Chiquita claimed that the allocation of percentage quotas by country was discriminatory. Second, Chiquita alleged a violation of constitutional rights of equality under Costa Rican law. This challenge centered on the allocation procedure of the E.U. export certificates. Chiquita charged that because the certificates were awarded based on participation in overall exports, without distinguishing between the E.U. and other destinations, that a secondary market in export certificates had developed (EIU, 1995, 1:16; La Nación, 23/3/95).

In addition, with the encouragement of Lindner, Robert Dole attempted to persuade the U.S. congress to punish Costa Rica for its acceptance of the quota system by suspending its export benefits under the Caribbean Basin Initiative (CBI) and the U.S. Generalized System of Preferences (GSP) (EIU, 1995, 4:5; 1996, 1:7; La Nación, 20/10/95). Further, U.S. President Clinton sent a letter to Costa Rican President Figueres requesting that Costa Rica reconsider its position with the E.U. because of the implications for Chiquita. José Rossi, the Costa Rican Minister of Foreign Trade (COMEX), declared that the letter practically stated that Costa Rica discriminated against Chiquita, and that he was surprised by Clinton's statement because it was made prior to the results of the USTR investigations. According to Rossi, the timing of the letter left Costa Rica in an impossible situation because the U.S. "on one hand conducts a clear, objective and transparent investigation, but on the other it puts forth opinions and a priori judgments" (La Nación, 18/4/95:25A).

In January 1996, U.S. trade representative Mickey Kantor withdrew his Section 301 investigation into the E.U. banana import rules (EIU 1995, 3:6; 1995, 4:5). The yearlong investigation had threatened to lead to trade sanctions against Costa Rica and Colombia because of allegations of unfair administration of the E.U. quotas. Just prior to this, the U.S. Senate majority leader, Robert Dole, temporarily abandoned efforts to impose trade sanctions on Costa Rica and Colombia, apparently because Kantor had reached an "understanding" with the governments of Costa Rica and Colombia, in that they agreed to change the administration of the quotas to prevent any unfair treatment of U.S. companies. (EIU, 1996, 1:7; La Nación,

20/6/95; La República, 21/6/95). The investigations against Costa Rica continued, however, because the Framework Agreement was also being challenged in the W.T.O. (EIU, 1996, 1:7; 1997, 3:8-9; Ransom, 1999).

In addition to formal challenges against Costa Rica, Chiquita also brought the dispute informally into its relations in the Costa Rican banana industry. The following incident, relating to CORBANA'S marketing company (DIFRUSA), demonstrates both the power of the transnationals and CORBANA's ambiguous role within the banana industry and the government.

In 1994, DIFRUSA contracted to sell its bananas to Chiquita, but in April 1995, Chiquita terminated this contract. As a result, over 700 workers were laid off, and more than 130,000 boxes of bananas were destroyed, valued at up to U.S. $2.5 million. Chiquita claimed that they terminated the contract because DIFRUSA failed to supply the total number of boxes and failed to sell the proper number of banana export certificates (CEBs). DIFRUSA and José Rossi, the Costa Rican Minister of Foreign Trade (COMEX) argued that this statement was ridiculous, as both of these actions are so commonplace in the banana industry that they did not justify the breaking of the contract.

It is important to recall that the distribution of banana export certificates within Costa Rica was based on 1994 production levels, and therefore it was in Chiquita's interest to boost the number of boxes it marketed during this period. The director of DIFRUSA argued that Chiquita only wanted the bananas until the end of

April, after which international demand decreases, and then broke the contract. In addition, there was a market oversupply because of reduced imports to the E.U.

The director of DIFRUSA believed that Chiquita's actions were intended to send a clear message to the Costa Rican government: "either get out of the Framework Agreement with the E.U. or we'll ruin everybody" (translated, La Prensa Libre, 28/4/95:2). Many within the industry and the government shared this opinion. Although Chiquita denied any connection, producers thought it curious that those affected were those associated with CORBANA, the institution responsible for distribution of the banana export certificates, necessary for export to the E.U. In addition, the director of ANAPROBAN (the industry association for independent producers) argued that DIFRUSA is one of the few means for relatively direct marketing for independent producers, and that "obviously this inconveniences the great multinational" (translated from *La República*, 22/4/95:6A).

DIFRUSA planned to take Chiquita to court, but Chiquita threatened to file a counter suit demanding damages of up to U.S. $5 million (La República, 22/4/95:6A; 6/5/95:6A; La Prensa Libre, 28/4/95:2; 3/5/95:13; La Nación, 2/5/95:19A; CORBANA documentation, personal communications at MAG, COMEX, CNB, ANAPROBAN, CORBANA, DIFRUSA).

In the end, DIFRUSA signed a contract in 1996 with Dutch company Jan Van der Brink to export bananas to the Netherlands. The initial volume of 80,000 boxes, worth U.S. $20 million, did not mitigate the losses DIFRUSA had previously incurred (EIU, 1996, 4:32).

b) The U.S. Media and Justice System

On May 3, 1998, the Cincinnati Enquirer published an 18-page exposé of Chiquita Brand International's operations. Reporters Mike Gallagher and Cameron McWhirter investigated Chiquita in depth, interviewing farm labourers and managers, environmentalists, government officials, financial experts, lawyers, professors and executives. Numerous Chiquita executives spoke only under conditions of anonymity for fear of retribution. Gallagher and McWhirter reviewed public and internal Chiquita documents, and traveled to Costa Rica, Honduras, Panama, St. Lucia, Dominica; to Brussels, Antwerp, Vancouver, New York and Washington D.C. They also gained access to more than 2,000 copies of taped voice mail messages, provided by a "high-level" source from Chiquita (Beaupre, 1998; Ransom, 1999; Gallagher & McWhirter, 1998: May 3; Horn, 1998: Sept. 19; Gregg, 1998: Oct. 8).

Gallagher and McWhirter's findings revealed that:

1. Chiquita actively controlled supposedly independent banana companies.
2. Chiquita actively suppressed union activity on its plantations by both legal and illegal means.
3. Chiquita subsidiaries used pesticides in Central America that are banned in the U.S., Canada, and the E.U.
4. Chiquita released harmful toxic chemicals on a regular basis.
5. Chiquita workers were regularly exposed to contaminated water, pesticides and aerial spraying without protective gear.
6. Women who work in Chiquita's packing plants, often without gloves, complained of rashes on their arms from the chemicals used on the bananas before they are shipped to market.
7. Chiquita executives bribed Colombian officials.
8. Chiquita called in the Honduran military to evict residents of a farm village. The

soldiers forced the farmers out at gunpoint, the village was bulldozed, and the land sold.

9. Chiquita constructed elaborate business structures designed to avoid governmental restrictions on foreign ownership of land, and to limit labour unions on the plantations.

On May 4, 1998, the day following Gallagher and McWhirter's article, Chiquita publicly denied the Enquirer's charges with the following statement:

> On Sunday, May 3, the Cincinnati Enquirer published a sensational and highly inaccurate story impugning the reputation and business practices of Chiquita Brands International. Chiquita is known globally as a leading international producer of wholesome and healthy foods and as a good corporate citizen - investing in local communities, building schools and improving the quality of life for tens of thousands. We are proud of the success we have had in providing benefits and wages in Latin America that far exceed those available from other jobs and protecting the environment in a manner that has earned praise from the most prominent independent environmental organizations. ... Chiquita adheres to the highest standards of product quality and social responsibility, applying world-class standards regarding associate relations, product quality and environmental controls. Chiquita will continue to meet its obligations as a good corporate citizen notwithstanding the unfair and inaccurate assertions of the Enquirer (Cincinnati Enquirer, 4/5/98).

In addition, Steven G. Warshaw, Chiquita's current President, said: "We at Chiquita are shocked by the Enquirer's admission that it obtained more than 2,000 messages containing confidential, privileged and proprietary information that was stolen from the private voice mail boxes of Chiquita employees" (Cincinnati Enquirer, 4/5/98).

Initially, Enquirer President and Publisher Harry Whipple said that the investigation was supported by multiple sources inside and outside the company and by extensive documentation, and that "the Enquirer stands by its stories. We

are proud of them." However, the Enquirer later apologized to Chiquita, offered the company a U.S. $10 million settlement to avoid being sued, and renounced the articles. The Enquirer then fired Gallagher, saying he deceived the editors about how he obtained voice-mail recordings quoted in the report (Ransom, 1999; Cincinnati Enquirer; Bauman, 1998; Democracy NOW!, 7/7/98; Kaufman, 1999: Sept. 28). Subsequently, Gallagher was charged, and pleaded guilty for illegally accessing Chiquita's voice mail system, using codes provided by a Chiquita source under the assurance of confidentiality. He was sentenced to five years of probation and 200 hours of community service. Cameron McWhirter, who co-authored the articles, was not charged, and now works for the Detroit News (Kaufman, 1999: Sept. 28).

Gallagher's and McWhirter's articles against Chiquita were extremely critical, their accusations broad reaching, concrete, and widely supported by various sources. Even without the voice-mail tapes material, the articles provided significant and justifiable criticism of Chiquita. The voice-mail material, however, was particularly damning, revealing the extreme power wielded by this transnational corporation. The charging and subsequent conviction of Gallagher provided Chiquita the means for an effective and complete dismissal of all of the material contained in the articles. Any question of the accuracy of the voice-mail was completely lost in the claim that it had been obtained illegally. Chiquita claimed a victory in damage control from the Gallagher/McWhirter articles, and it is questionable how the Chiquita exposé affected the public.

But there is more to this episode than questions of journalistic information sources. The relationship between Chiquita and the U.S. justice system also came into question. This specific issue arose out of campaign contributions by Chiquita Chairman Carl Lindner and his family to lawyers and judges involved in Gallagher's case (Horn, 1998: Nov. 11). Initially appointed County Prosecutor Deters stepped aside, saying he had received campaign contributions from Lindner. As a result, a private attorney, Ancona was appointed as special prosecutor.

The assigned judge Nadel, had also received campaign contributions both from Chiquita executives and from special prosecutor Ancona (The Associated Press, 1998: July 10). Gallagher had assured his source of the voice-mail access codes confidentiality, but when Gallagher challenged a subpoena compelling him to testify about the source, Nadel denied the challenge. In his testimony, Gallagher emphasized the importance of protecting the confidentiality of journalists' sources. However, despite an Ohio shield law that allows reporters to protect their sources' identities, Gallagher's cooperation agreement required complete disclosure of confidential sources used in writing the articles (Horn, 1998: Dec. 5). Cameron McWhirter also signed a cooperation agreement, but was not required to disclose confidential sources.

Gallagher's testimony revealed the source of the access codes was George Ventura, a former attorney for Chiquita in Honduras (Beaupre, 1998; Ransom, 1999; Gallagher & McWhirter, 1998: May 3; Horn, 1998: Sept. 19; Gregg, 1998: Oct. 8). As a result of Gallagher's disclosure, Ventura was convicted of four misdemeanor

charges of stealing voice-mail messages from Chiquita, and was sentenced to two years of probation and 40 hours of community service (Horn, 1999: March 19; Kaufman, 1999: Sept. 28).

Ventura's trial raised another question mark about the justice system. The first three judges randomly assigned to the case withdrew because they had received campaign contributions from Lindner and his relatives. Finally, a Judge Tracey was assigned the case, but special prosecutor Ancona asked her to step aside because she had received contributions from one of Lindner's attorneys and had previously worked with one of Ancona's assistants. Despite requests from prosecutors and defense attorneys who feared she might have a conflict of interest, Judge Tracey refused to leave the case, saying that she was confident she could hear it fairly (Horn, 1998: Nov, 11; 19; 21; 24; The Cincinnati Enquirer, 1998: Nov, 13).

Ventura's lawyer, Marc Mezibov, suggested that the appointment of both special prosecutors Ancona and Breyer (who replaced Ancona for the trial phase) might have been irregular, stating, "there remain significant questions as to the legality and validity of the appointment of the special prosecutor" (cited in Horn, 1998: Dec. 24). Further, Mezibov argued that officials illegally withheld documents important to the investigation. These records were not provided because Judge Nadel, who had heard Gallagher's case (and had also received campaign contributions from Chiquita executives and from special prosecutor Ancona) had ordered them sealed as part of the grand jury investigation. Mezibov responded, "It

seems unconstitutional and irregular. ...I don't see how they can seal that public record" (Horn, 1998: Nov. 12; Dec. 24).

Just as money from Chiquita and the Lindner family was widely spread throughout the U.S. political system in order to obtain political favour, so it was spread throughout the U.S. justice system. Because of the possible influence of money from Chiquita, it is impossible to confirm the legitimacy and legality of Gallagher's conviction, of the breach of confidentiality revealing Ventura, or of Ventura's conviction. Although the Gallagher/McWhirter articles with the Chiquita exposé were published, the Enquirer's apology to Chiquita, and the convictions of Gallagher and Ventura probably had greater public impact. In the end, Chiquita appeared vindicated.

6. Wider Consequences of the Banana Wars

The banana wars were about power and money. These wars manifested the power wielded by Chiquita and the U.S. within the banana industry and in the international political economy. So when the wars ended, what remained was carnage, as well as all the issues surrounding bananas.

a) Chiquita: Paying for the Banana Blunder?

Chiquita Brands International claims annual losses of over a billion dollars during the years of the Banana Wars. Not surprisingly, Carl Lindner blames these losses on the E.U., stating: "I hope that Europe's leaders will now honor their obligation to conform their banana regime and eliminate the harm that Chiquita has sustained" (Brothers, 1999: Apr. 7). In December 1999, Chiquita announced that the

banana trade wars and harsh industry conditions would lead to a fourth-quarter loss of between $72 and $82 million, or $1.15 to $1.30 per share. Chiquita's stock was trading roughly for what it was worth in 1987, while the stock market had seen one of the largest overall growth periods in its history (Reuters, 1999; Barlett & Steele, 2000; McWhirter & Gallagher, 1998: May 3, Ransom, 1999).

Although Chiquita's economic losses were dire, it should be noted that these 'losses' were based on Chiquita's own miscalculations regarding projected increases in exports to the E.U. Had Chiquita not expanded banana production in Costa Rica in advance of the E.U. ruling, its losses would have been negligible. On the other hand, had there in fact been an increase of the E.U. market, it would have taken several years to prepare new plantation lands before Chiquita could take advantage of these market conditions. It was a business decision, and Chiquita, like many others, made a mistake. According to Clyde Stephens, a retired Chiquita executive, "Pretty soon the whole damn thing blew up on them. ... It was a gross mistake, and they're paying for those mistakes right now" (cited in McWhirter & Gallagher, 1998: May 3).

Further, countering Chiquita's proclamations of its victim status, it appears that Chiquita's losses were also due to errant business decisions and poor planning by company officials (McWhirter & Gallagher, 1998; Ransom, 1999; Barlett & Steele, 2000). According to Tim Ramey, an industry analyst for Deutsche Morgan Greenfell in New York, "Chiquita has been a disaster of management...They have an amazing

ability to shoot themselves in the foot" (cited in McWhirter & Gallagher, 1998: May 3).

Not only financial difficulties dog Chiquita. As a direct result of the Gallagher and McWhirter exposé in the Cincinnati Enquirer, the E.U.'s Commission on Agriculture launched an independent investigation into Chiquita, as did the governments of Costa Rica, Colombia, Honduras, and France (Gallagher & McWhirter, 5/5/98; 6/5/98; 8/5/98). Five stockholders of Chiquita Brands International filed separate lawsuits against the company and its board of directors, saying they "violated their duties by engaging in illegal acts, gross mismanagement and abuse of corporate control" and that the plaintiffs had suffered damages "caused by a pervasive and on-going course of illegal conduct designed to artificially inflate the earnings of Chiquita" (Gallagher and McWhirter, 9/5/98; McWhirter, 28/5/98).

Chiquita portrays a public image of corporate responsibility and integrity toward the environment and its workers in its international operations, and claims that its present status represents a victory for free trade against corporate discrimination. However, as will be discussed in later chapters, there are indications that all is not as rosy as Chiquita's corporate publicity would suggest.

In contrast to Chiquita, Dole has fared reasonably well. Ramey explains that, "Dole has said, 'We can't do a whole lot to fix the political solution.' Instead, they said, 'Let's just adapt to the situation'. ... Meanwhile, Chiquita continues to stagnate while they are fixated on this WTO decision" (cited in McWhirter & Gallagher, 1998:

May 3). In the years leading up to the banana wars Dole purchased banana plantations in EU-protected countries like Cameroon. Dole has also acquired some of Chiquita's market share, and has benefited from the recent strength of the stock market. In April 1998, Dole stock traded at more than $45 per share, while Chiquita stock was at about $14 (McWhirter & Gallagher, 1998: May 3).

Chiquita has repeatedly attempted to minimize its substantial losses, and to conceal its mistakes, at the expense of others. According to Mbarga Atangana, European representative of the Association of Cameroon Banana Producers, "Chiquita has made some errors when the common market was created. ... [And] they want now that all the growers in the ACP countries pay for their mistakes" (cited in McWhirter & Gallagher, 1998: May 3). This scenario was only possible because of Chiquita's financial and political power within the banana industry and the U.S. political system. Tim Cuniff, del Monte's director of marketing for North America, said Chiquita is trying to cover its own financial mistakes by blaming them on the European restrictions: "Lindner paid a ton of money supporting presidential campaigns, and he thought that he was going to get some type of favors. ... Now he's got to start calling in some marks to show that he was doing right by his shareholders" (cited in McWhirter & Gallagher, 1998: May 3).

b) Caribbean and Latin American Producers

The real victims of the Banana Wars may well be the Caribbean and Latin American Producers. The Caribbean producers, small rural cooperatives, are one of the few remaining non-transnational enclaves of banana production worldwide.

The economies of these Caribbean banana-producing countries depend heavily on banana exports. Without protected access to the E.U., these countries would soon be dominated by the banana transnational corporations, which are eagerly awaiting expansion. This economic change would devastate these Caribbean countries (Sexton, 1997; Welsh, 1996; Zaretsky, 1996; Ransom, 1999). The E.U. continues to argue that success of the U.S.-WTO strategy "would lead directly to the destruction of the Caribbean banana industry and provoke severe hardship and political instability in a region already struggling against deprivation" (cited in Sexton, 1997). The Caribbean Basin Initiative promised a new era in development and prosperity for the islands, but Rupert Gajadhar, chair of the St. Lucia Banana Growers Association, is skeptical, and asks, "What do the Americans want to do, reduce us to another Haiti?" (cited in Griswold, 1997).

In December 1999, the U.S. backed a Caribbean proposal to reform the E.U. import structure, which is claimed to be WTO-consistent. The proposed two-tier import system would be implemented after a transition period. However, the involvement of the Caribbeans in this venture does not indicate that the relevant issues, such as the protection of non-transnational banana cooperatives, have been addressed. Without doubt the U.S.-Caribbean proposal provides less protection than did the Lomé Convention, especially since the Lomé Convention was partly designed to protect Caribbean producers from the U.S. banana transnationals such as Chiquita.

The wars have also taken their toll on Latin American countries. The negative effects are most pronounced among the non-transnational marketing companies, the independent producers, and banana workers.

In Costa Rica, the anticipation of increased exports to the E.U. resulted in massive investments, loans and a doubling of banana production. Although the Framework Agreement temporarily helped mitigate some of the losses, total export levels were much lower than anticipated. Costa Ricans too paid for 'the Big Blunder,' manifested as massive amounts of debt for banana producers. Although debt was incurred both by transnationals and by independents that had increased their production, it was far more onerous for independents, whose loans were in Costa Rican currency and were subject to extremely high interest. Many producers that had not increased production during this period also went into debt, because the over-supply of bananas, combined with a decrease in exports, made it more difficult and less profitable to sell bananas.

The banana wars increased over-supply and decreased world prices. In 1999, this situation was exacerbated by lowered demand from China and Russia and a sharp increase in production in Ecuador, both of which depressed the market (EIU, 1999, 3:19-20; 4:19-20). Also, the WTO ruling and the announcement of a transitory agreement resulted in increased uncertainty within the banana sector.

It is unclear what level of production the market will support, or how it will be distributed among banana-producing countries. This issue is important, partly because of the massive increase in plantations in anticipation of the opening of the

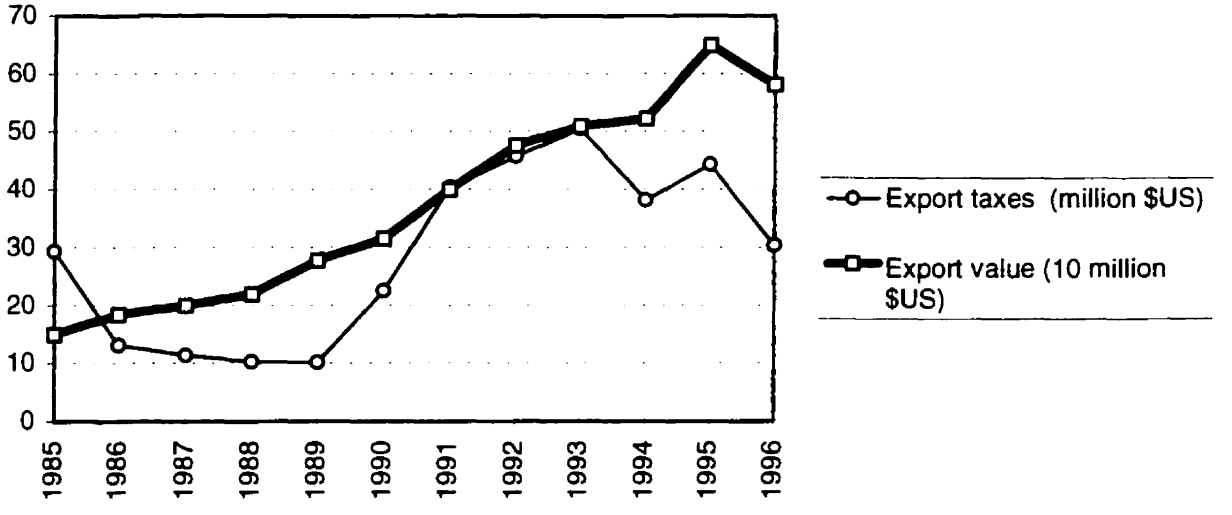
E.U. market. In 1998, Costa Rica achieved record production of 116 million boxes (EIU, 1999, 1:21). This record reflects the increased numbers of plantations. These levels were not seen earlier because new plantations require approximately five years to achieve their potential, and 1996 and 1997 saw natural disasters in Costa Rica (floods in February and July, and hurricane César in September, 1996) (EIU, 1996,1:26, 1997, 1:28; CORBANA, 1996; fieldwork; personal communications). It is unlikely that the market will support the 1998 level of production.

As a result, the traditional benefits of the banana industry for Costa Rican development, i.e. foreign capital, infrastructure, and employment, have been eroded. The transnationals and the independent producers argued for a drastic reduction in the per-box tax. However, the unstable market has forced Costa Rican banana producers to cut prices to remain competitive, especially given cheaper production costs elsewhere, particularly Ecuador (EIU, 1999, 3:19-20). As a result, the Costa Rican government eliminated the per-box tax completely, though the export tax was retained. This was intended to help banana exporters, faced with the dispute over quotas with the E.U. and the U.S. Producers argued that they were unable to compete with countries such as Colombia and Ecuador which have lower export taxes and therefore lower costs of production. In addition, independent producers argued that the tax made it difficult for them to maintain economic viability in a market dominated by the transnationals (EIU, 1990, 4:23-4; 1995, 4:22, 1996:1; La Nación, 1/11/95; 9/11/95, CORBANA documentation).

The tax cuts significantly reduced the banana industry's potential to generate foreign capital (EIU, 1999, 3:19-20). By the end of 1995, as the dispute continued, it was proposed that the export tax be further reduced from U.S. $0.30 to U.S. $0.04 by 2003 (EIU, 1995, 4:22; 1996, 1:26; La Nación, 1/11/95; 9/11/95, CORBANA documentation). The impact of these tax cuts can be seen in the following table and graph. As production and export values increased dramatically, export tax revenues increased initially, but after 1993, they decreased dramatically to levels approaching those in 1985.

| boxes of 18.14 kg. | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Boxes exported (millions)** | 44.3 | 48.6 | 52.0 | 56.6 | 67.5 | 74.1 | 80.9 | 91.4 | 101.1 | 103.3 | 112.1 | 106.6 |
| **Export value (million $US)** | 149.6 | 184.2 | 199.0 | 219.6 | 278.2 | 315.8 | 400.5 | 476.4 | 509.4 | 522.9 | 649.3 | 581.0 |
| **Export taxes (million $US)** | 29.3 | 13.1 | 11.4 | 10.2 | 10.1 | 22.5 | 40.4 | 45.7 | 50.5 | 38.1 | 44.3 | 30.3 |
| **% export taxes of export value** | 19.6 | 7.1 | 5.7 | 4.6 | 3.6 | 7.1 | 10.1 | 9.6 | 9.9 | 7.3 | 6.8 | 5.2 |

*table compiled from CORBANA sources*




The economic instability in the industry, and increased debt for plantation owners affect the banana industry's role as creator of infrastructure, as well as

employer. As Costa Rica cuts prices to remain competitive, producers are negatively affected. However, because they are both marketers and plantation owners, the transnationals are least affected by this dilemma. Indeed, they have spread the risk of an unstable market by transferring a large proportion of the costs to the independents. In October 1999, Standard Fruit announced it would not renew contracts with 11 of its 25 independents (EIU, 1999, 3:19-20), and likely Standard will not be alone in this decision. The independents will be forced to find new buyers for their fruit in a context of over-supply, low profit, high debt, uncertain markets, and increased transnational consolidation and protectionism. Likely a significant number of plantations will close, with a corresponding loss of jobs.

Market uncertainty and decreased prices, combined with increased debt may well force producers to cut costs, especially labour costs. However, the profit margin for independent producers is very narrow and banana production is very labour-intensive. Therefore it is unlikely that most producers will be able to significantly reduce the number of workers, nor will they be willing to accept the decreases in production and quality that would increase the odds of selling bananas in a context of over-supply. In fact, as a result of these factors, workers have already been dismissed and re-employed at much lower wages. This is only possible because of the relative underdevelopment of the Atlantic zone of Costa Rica with concomitant lack of job opportunities and options. In this way, the costs have been transferred to independent plantations and to workers (EIU, 1999, 3:19-20). These issues will be discussed further in chapter 7.

Addressing the needs and interests of the non-transnational marketing companies, independent producers, and banana workers is no easy task. Their interests are heavily constrained in the current structure of the banana industry, largely because of the power of the transnationals at both international and national levels. The 'Octopus' (Chiquita, formerly the UFCO) has its tentacles in virtually every aspect of the industry, either formally, or informally. Influence, interference, and manipulation can be seen at the international level, and in Costa Rica in the relations among the various players in the industry, especially among the transnationals, the independents, and CORBANA, as discussed earlier.

To assist plantations in these difficult times, CORBANA is promoting a pilot project to introduce 'precision agriculture' methods to raise productivity on the plantations (EIU, 1999, 3:19-20). However, this measure does not address the issues of oversupply and uncertainty at the international level. These procedures will only assist plantations that are still in operation, which will be likely transnational plantations or those independents that have maintained contracts because their productivity levels are high. These plantations are likely to have already incorporated 'precision agriculture' into their production.

Further, a simple increase in exports is insufficient to ensure support for non-transnational marketing companies and independent producers. The transnationals dominate the industry, and various industry institutions lack role definition. The ambiguity of national and corporate roles and responsibilities within the banana industry represents a fundamental issue with respect to Costa Rican development,

and is greatly complicated by the power of the transnationals. Clearly, the ability of CORBANA to challenge the transnationals, or even to coordinate the interests of the government, of independent producers, and of the transnationals is questionable. The termination of the contract with DIFRUSA exemplifies the power wielded by the transnationals within the banana industry.

According to the director of DIFRUSA, many Costa Rican banana producers dream of developing a banana industry, with production, marketing, and transport all controlled by Costa Ricans. Although he is hopeful, he admits that because of all the factors discussed above, this dream has little chance of coming true (personal communication).

c) Towards a New Banana Regime with the E.U.

Although the WTO ruling represents a clear victory for free trade, it leaves many issues unresolved. Clearly, a new banana import regime will be required. But the WTO ruling has constrained the range of options available to address the delicate balance of interests involved. In addition, the WTO ruling has reinforced a climate in which international policy is heavily influenced, possibly even determined, by the power of the transnationals and their ability to obtain the political backing of the U.S.

The impetus for the E.U. to negotiate a new banana import regime in order to protect ACP producers and to eliminate U.S. tariffs represents a threat to favourable trade conditions for those countries that signed the Framework Agreement. As a result, the Costa Rican government announced that it would use all its means to

defend its access to the E.U. market, even though José Rossi, the Costa Rican foreign minister, had previously stated that the government would abide by the ruling of the WTO (La Nación, 18/4/95, 29/9/95; EIU, 1998, 1:28). In addition, Colombia proposed that the Framework Agreement be extended to other countries rather than abolished. It feared that complete liberalization of the market would harm small Latin American banana producers and benefit only the large U.S. fruit companies, like Chiquita (EIU, 1997, 3:9, 4:29-30).

In November 1999, the E.U. proposed a transitory quota scheme to run for 6 years, starting in January 2000. The overall quotas from the original accord were maintained, but without specifying the distribution of the quota among countries. The scheme was immediately rejected by the U.S. and the tariffs on E.U. products remained (EIU, 1999, 3:19-20; 4:19-20; Ransom, 1999; Reuters, 1999).

In December 1999, Washington allied with the Caribbean by endorsing a proposal by Caribbean nations to reform the European Union's banana import rules. This places the E.U. in the uncomfortable position of bargaining against the U.S. and the Caribbean. The Caribbean proposal calls for a tariff-only system after a transition period with a two-tiered import system. The first tier of tariffs would apply to 2.7 million tons of bananas, and would be the same for Latin American and ACP producers. The second tier would apply to 850,000 tons of bananas, for which the ACP countries would have duty-free access. It should be noted that even though the Caribbean co-authored the proposal, it does not mean that all of the relevant interests and issues were addressed. Purportedly, the U.S.-Caribbean proposal

would be WTO- consistent, and therefore would lead to the elimination of almost U.S. $200 million in U.S. sanctions imposed on E.U. products (Reuters, 1999). This relief represents a great incentive for the E.U. to accept the U.S.-Caribbean proposal.

On the other hand, Alvaro Gonzalez de Cossio, the Brussels delegate for ASPROCAN (Association for Banana Plantations on the Canary Islands), has stated that if the E.U. proposes changes that his farmers don't like, the organization will work to block ratification in the European Council: "It doesn't matter if the council has done something that makes the Americans and Chiquita very happy. If we don't like it, there will be a major political problem." Under the current system Spain, Portugal, France and the United Kingdom have a blocking minority in the council. The complex issues and conflicting interests involved in a new banana regime means that it is unlikely that the issues will be resolved soon. As Tim Ramey, an analyst from Deutsche Morgan Grenfell, concluded: "It is going to be marathon foot-dragging" (cited in McWhirter & Gallagher, 1998: May 3).

## 7. Conclusion

Both the international and national dynamics of the banana industry and the events surrounding the banana wars are consistent with a world systems perspective in several ways. First, it is clear that power and money are primary forces behind the course of events and their outcomes. Second, the national level of analysis is insufficient without the international context necessary to reveal these power dynamics. Third, the role of transnationals is fundamental in shaping the dynamics of the industry, and it is the transnationals (particularly Chiquita Brands

International) around which much of the power relations are articulated. Chiquita took a business risk in positioning itself for increased profits and market share by increasing its plantation holdings and production. As it turns out, Chiquita blundered. Following this mistake, Chiquita threw its financial and political weight around, and took advantage of its empowered status in the Costa Rican banana industry and of its high-level political and financial connections. In doing so, Chiquita, 'the octopus', used both legitimate and illegitimate means to cover its mistake, attempting to cut its losses, consolidate its resources and power, and to ensure that others would pay for its error.

Fourth, there is a strong centre-periphery relationship associated with these events, which becomes evident in terms of who is least and most affected by their consequences. Those most negatively affected are: 1) potentially, ACP producers and nations; 2) Costa Rican and other Latin American banana workers and their families, through loss of employment, wage decreases, and lower levels of infrastructure investment by banana companies; 3) independent plantations, through more competition for contracts with marketing companies, higher levels of productivity required, higher levels of debt, lower prices, and decreased demand; and 4) independent marketing companies. On the one hand, independent marketing companies may have increased potential as more independent plantations seek marketing when their contracts are not renewed with transnationals. On the other hand, low market price, lower demand, and high levels of over-supply will threaten their survival.

Those affected to a much lesser degree by the negative consequences are: 1) some small businesses from the U.S. and the E.U. because of import tariffs from the E.U.; 2) the E.U.; and 3) U.S. banana transnationals. Although Chiquita did sustain substantial losses, the power of the transnationals within the banana industry was maintained. Also, much of the transnationals' losses were transferred to others.

Actually benefiting from these events were: 1) American politicians, who maintained and perhaps even increased their power in the international arena, and received hundreds of thousands of dollars in donations; 2) the U.S., which maintained or perhaps consolidated political power in the international arena, partly through the reinforcement of trade liberalization through the WTO; 3) E.U. and North American consumers, who will likely receive high-quality, low-cost bananas, as quality increases prices decrease. It is no surprise that those who benefit or who sustained fewer losses are the traditionally empowered in the current world system.

# Timeline Chart

| | |
|---|---|
| **1985-1992** | -Increase in new plantations in anticipation of access to E.U. |
| **1992** | -Creation of the E.U., necessitating a single import regime<br>-E.U. proposes the Banana Accord |
| **1993** | -Latin American producers and U.S. transnationals reject the Banana Accord<br>-Massive financial donations from Lindner and Chiquita to U.S. political figures and parties<br>-Guatemala and the U.S. file complaint with GATT, later transferred to the WTO<br>-2 competing Latin American counter-proposals to the E.U. |
| **1994** | -Framework Agreement extended to Costa Rica, Venezuela, Colombia and Nicaragua, in exchange for not filing complaints with GATT<br>-Chiquita files a Section 301 Petition with the United States Trade Representative (USTR) against the banana accord and the framework agreement |
| **1995** | -The Framework Agreement comes into effect<br>-The U.S. trade representative, Mickey Kantor, agrees to investigate Chiquita's claim against the E.U. and the countries which signed the framework agreement: Costa Rica, Venezuela, Colombia and Nicaragua<br>-Chiquita challenges allocation procedure of the E.U. export certificates under Costa Rican law<br>-Chiquita terminates contract to buy fruit from DIFRUSA, a CORBANA subsidiary<br>-Lindner encourages Robert Dole to suspend export benefits to Costa Rica.<br>-U.S. President Clinton writes Costa Rican President Figueres to reconsider its position with the E.U.<br>-the U.S., Guatemala, Honduras, Mexico and Ecuador transfer their case to the WTO |
| **1993-1996** | -Lindner Family, Chiquita, and Corporate Executives make massive financial contributions to U.S. Democrat and Republican Parties coinciding with key events associated with the 'banana wars'. |
| **1996** | -Kantor withdraws Section 301 investigation and talk of trade sanctions abandoned after Costa Rica and Colombia agree to change E.U. quota distribution so as not to be discriminatory to U.S. companies<br>-Investigations associated with the WTO complaint continue |
| **1997** | -First WTO ruling against the Banana Accord and Framework Agreement; E.U. appeals |
| **1998** | -Publication of Gallagher and McWhirter exposé against Chiquita<br>-Cincinnati Enquirer pays Chiquita $10 million settlement, recants articles<br>-Gallagher convicted of stealing voice-mail tapes from Chiquita |
| **1999** | -Final WTO ruling: Banana Accord and Framework Agreement are discriminatory<br>-Retaliatory tariffs introduced by the U.S. against selected E.U. products<br>-E.U. proposes transitory quota regime; U.S. rejects<br>-U.S. proposes Caribbean-approved, 'WTO-consistent' regime<br>-Chiquita announces continued massive financial losses |

## Chapter 6: Environmental Issues in the International Banana Industry

Sustainable development theories generally argue that although environmental destruction occurs regionally, an international analysis is necessary. The rationale for this perspective is that regional damage of the water, air and soil that constitute the entire planet may well affect other areas because of geo-climatic factors. In addition, it is recognized that international power structures have great bearing both on the exploitation of natural resources and on environmental destruction, as well as their prevention and resolution. Many world systems theorists share this type of analysis.

This chapter focuses on environmental issues from both the national (Costa Rican) and international levels of analysis. The environmental consequences at the micro level will be considered in chapter 9. The chapter opens by examining the industry switch to the Cavendish variety of banana, and of some of the consequences, such as sigatoka disease and nematodes. These conditions require regular, large applications toxic chemicals, two of which, DBCP and Aldicarb, are discussed.

Recently, there has been increased pressure for environmental sustainability within the banana industry, to which Costa Rica and the industry are now responding. The transnationals have presented themselves as leaders of a new era of corporate environmental responsibility. The fiction of this stance is revealed through discussion of the repression of an environmental report critical of the banana industry, the inaccessibility of the transnationals, and the questionable

effectiveness of two environmental certification programmes. The power of the transnationals at all levels of the industry is discussed throughout the chapter.

1. Cavendish Bananas and their Chemical Dependents

Bananas and plantains belong to the genera Musa. Two wild species, Musa Acuminata and Musa Balbisana, have been genetically engineered to produce more commercially conducive hybrids by increasing disease resistance, allowing them to thrive in different soil conditions, and by changing the amount of fruit per plant, as well as flavour, texture and appearance (Pérez et al. in Soto, 1992: 139-203; Vandermeer in Janzen (ed.), 1983: 75-77). As discussed in chapter 3, until the 1950s the dominant cultivar was the Gros Michel variety, which has large fruit, good texture and taste, and resistance to nematodes and sigatoka disease. However, it is highly susceptible to Panama disease, and because of the height of the plants (6 to 8 metres), has low productivity in terms of area, and is susceptible to wind damage (Pérez et al. in Soto, 1992: 139-203). By the 1930s, Panama disease had affected all Costa Rican banana plantations, necessitating crop rotation every two to five years, which required an enormous amount of land and threatened profitability.

In 1956, Standard Fruit opened operations in Costa Rica using the Cavendish variety, which they had developed in Honduras. There are several types of Cavendish bananas, including Valery (Robusta), Dwarf Cavendish, and Giant Cavendish (Grand Nain), (López, 1988:17), all of which are resistant to Panama disease. The switch to the Cavendish effectively saved a threatened industry. However, although the Cavendish varieties resist Panama disease, they are very

susceptible to bruising and over-ripening during transport. More importantly, they are particularly vulnerable to sigatoka disease and to nematodes. Thus by switching varieties, the problem of Panama disease was replaced by that of delicate fruit, sigatoka disease and nematodes. This tradeoff was considered a significant improvement since the latter problems can be somewhat controlled, whereas Panama disease cannot. (Pérez et al. in Soto, 1992:139-203).

The problem of delicate fruit was managed by packing bananas in cardboard boxes, instead of transporting them on the stalks. As a result, it became possible to transport boxes by truck instead of rail from plantation to port, which gave Standard a significant competitive edge because United Fruit (the predecessor of Chiquita) controlled much of the rail network in Costa Rica. The bananas were then transported by container ship with highly regulated temperature controls and ethylene exposure so that they ripened sufficiently to be acceptable for markets (Pérez et al. in Soto, 1992: 139-203; Standard Fruit Company documentation).

The Valery type of Cavendish banana, which initially replaced the Gros Michel, is cylindrically shaped, with stalks of variable sized bunches which are difficult to pack into boxes. For this reason it was eventually eliminated as the primary cultivar. Dwarf Cavendish is the most distributed, although not the most cultivated hybrid worldwide. The plants adapt to a wide variety of climatic and ecological conditions, making it an important hybrid in the Canary Islands, Israel, Africa and Australia. It has a high yield, given the size of the plant, but the fruit is small and delicate, thus less marketable and transportable. Dwarf Cavendish is not

cultivated in Central America because of the low quality of the fruit. As a result, by the mid-1960s Giant Cavendish became the exclusive cultivar in Central America (Pérez et al. in Soto, 1992: 139-203).

After resolving the issues of Panama disease and of delicate fruit, the problems of sigatoka disease and nematodes remained.

a) Sigatoka

Sigatoka disease, considered by many as the most serious threat to the banana industry since Panama disease (Sierra, 1993:460; CORBANA documentation) is fungal, causes premature ripening of the fruit and lowers productivity, but rarely kills the plant. The disease first appeared in Fiji in 1963 and in then in Honduras in 1972. Subsequently it spread throughout Latin American banana plantations. One primary means of sigatoka transmission is wind dispersion, and as a result, a high degree of infection exists in areas of high banana plantation density. For this reason, effective control of sigatoka must be industry-wide within a given region.

Currently, the only effective means for controlling sigatoka is through application of various chemical fungicides, primarily through aerial spraying. In Costa Rica, like many other countries, plantations must be sprayed against sigatoka in order for the fruit to be sold for export (Sierra, 1993). Several different types of chemicals, most of them systemic fungicides, are used for sigatoka control, including clorotalonil, mancozeb, benomil, tridemorph, and propoiconazol. The World Health Organization (WHO) lists all of these as at least somewhat toxic to humans through inhalation, ingestion or skin contact. They are also very toxic to fish (MIRENEM,

1992). Specifically, Tridemorph (e.g. brand name: Calixin) is one of the primary fungicides used in Costa Rica against sigatoka. The World Health Organization (WHO) considers it highly toxic, harmful to embryos and fetuses, a skin irritant, and highly toxic to fish (MIRENEM, 1992).

As discussed earlier, chemicals used for sigatoka control are applied via aerial spray. There is no warning of imminent spraying. The chemical spray covers all of the banana plantations, adjacent land, streams or rivers, animals, and any people who happen to be present. In many countries, including Costa Rica, several different fungicides are combined into so-called 'cocktails', which are combinations of several chemicals that increase the effectiveness of the treatment and prevent resistance. However, the exact ingredients and proportions of chemicals used in these 'cocktails' are considered a 'trade secret', which may represent a competitive edge among companies (Sierra, 1993; Hernández, 1997).

There is a First World chemical connection with Tridemorph (e.g. brand: Calixin), which is produced by German-based BASF. Germany is one of the largest importers of Latin American bananas; in 1996, 11% of Costa Rican bananas were exported there (CORBANA, 1996). Despite these risks and costs, sigatoka control is obligatory for consumers to receive an unlimited supply of cheap, cosmetically perfect bananas. Clearly, the profitability associated with an industry dependent on chemicals for producing cheap export bananas is such that there is great incentive for those who benefit, particularly the banana and chemical transnationals, for maintaining this system of production.

Genetic development of a banana resistant to sigatoka is a research priority, for two main reasons. Firstly, sigatoka control is extremely costly. In Costa Rica, plantations must be sprayed 35 times a year, at an annual cost of approximately U.S. $2000 per hectare, which represents 12-16% of production costs. The total annual cost to Costa Rica is approximately U.S. $80 million (EIU, 1998, 3:18; Hernández, 1997:79). Secondly, and most importantly, there is great fear of the emergence of fungicide-resistant strains of sigatoka, caused by high levels of chemicals in use. The advent of fungicide-resistant sigatoka would represent a serious threat to the banana industry worldwide (Sierra, 1993:464, 489-90; CORBANA documentation; INIBAP, 1994).

In 1995, the Honduran Foundation for Agricultural Research (FHIA) reported that a variety of banana resistant to Sigatoka had been developed, known as FHIA-21 (EIU, 1995, 2:6). Then in 1998, the School of Agrarian Sciences of the National University in Heredia, Costa Rica announced the development of a hybrid significantly more resistant than other strains to sigatoka. It is hoped that this new hybrid, developed through DNA alteration with gamma rays, can halve the cost of sigatoka control (EIU, 1998, 3:18). Both of these findings represent ongoing research efforts into genetic control of sigatoka.

It should be noted that the banana industry is interested in genetic control of sigatoka, not only for the reasons noted above, but also to avoid external scrutiny of the chemicals currently used against sigatoka. The banana industry is very concerned about this issue. The United Nations' Food and Agriculture

Organization's Intergovernmental Group on Bananas set up a special committee called the Banana Improvement Project, hoping that the major companies would provide money and technical assistance to address difficult problems such as sigatoka. At the 1997 Intergovernmental group's meeting in Rome, the failed Banana Improvement Project reported that, "the lack of financial support from the banana industry is surprising and extremely disappointing" (McWhirter & Gallagher, 1998: May 3).

b) Nematodes, DBCP and Aldicarb

Nematodes, microscopic parasites, attack the roots of banana plants. They are most prevalent and most damaging in very moist soils, such as those in the Atlantic region of Costa Rica. Because the root system is affected, nematode-affected plants respond poorly to fertilizers, and are more susceptible to disease and wind damage. Nematodes can reduce banana yields from 15 to 50%. Nematode damage appears similar to other diseases that affect banana plants, and therefore assessment must be done through soil sample analysis in a laboratory (Sierra, 1993). In Costa Rica, technicians and laboratories of the transnational banana producers perform this expensive diagnostic procedure, offering the service to independent plantations for a fee.

Although INIBAP (International Network for the Improvement of Banana and Plantain) has done some research in finding a hybrid banana resistant to nematodes, there has been no success to date (Sierra, 1993; INIBAP, 1994; personal communications). Because it is impossible to completely eliminate nematodes,

control methods are aimed at reducing nematode impact to an economically acceptable level. Protecting plants from wind damage by stabilizing them with rope is an important practice in this respect (Sierra, 1993:411).

The most important method for combating nematodes is chemical application, which has been in practice since the introduction of Cavendish varieties. Chemical nematicides include Dibromochloropropane (DBCP), Furadan (Carbofuran), Mocap (Ethoprop), Nemacur (Phenambiphos), Temik (Aldicarb), Vydate L (Oxamyl), and Counter (Terbufos). All of these chemicals are highly toxic to humans (Sierra, 1993: 417; MIRENEM, 1992). Of these, the most infamous nematicide was dibromochloropropane (DBCP), sometimes referred to as Nemagón or Dowfume. Produced by Dow Chemicals of the U.S., DBCP was used extensively in Latin America and Costa Rica throughout the 1960s and 1970s. Because it is extremely toxic to humans and causes male sterility, DBCP was banned in the U.S. in 1977 and in Costa Rica in 1978. However, Dow Chemical continued supplying DBCP to Costa Rica after the U.S. ban, on the condition that Standard Fruit would pay any damages (Jansen, 1998).

In 1996, after initial setbacks, banana workers were finally successful in having a case against Dow Chemical, Occidental Chemical, Shell Oil, Standard Fruit, Dole Fresh Fruit, Chiquita Brands International and Del Monte heard in a Texas court. The case was comprised of 25,000 lawsuits, of which some 6000 were Costa Rican. The listed companies were charged with negligent use of DBCP, and with knowingly exposing workers with minimal or no protection to the dangerous toxic

effects of the chemical, resulting in sterility and other health problems. Although the case was significant in its own right, it also facilitated the potential to bring similar cases against U.S. companies in U.S. courts (EIU, 1994, 1:14, 1996, 2:25; 3:27; Jansen, 1998).

In 1997, Dow Chemical offered a U.S. $22 million out-of-court settlement (EIU, 1997, 3:30). Some Costa Rican workers accepted the deal, but according to Jansen (1998: 223-4), the 981 workers who received payments were largely unhappy with the settlement. Reportedly, 40% was deducted from the settlement for lawyers' fees, and spouses and children of workers were excluded, even though their exposure to DBCP was significant. According to McWhirter and Gallagher (1998: May 3), the settlement worked out to several hundred dollars per complainant. Later in 1997, approximately 8000 additional Costa Rican workers joined workers from the Philippines, Honduras and the Ivory Coast in pursuing new cases in the U.S.

With DBCP banned, one of the primary replacement nematicides was Aldicarb. The World Health Organization (WHO) rates Aldicarb as extremely toxic for humans, birds, fish, aquatic organisms, and with the ability to reach underground water sources (MIRENEM, 1992). Professor Luisa Castillo, head of the National University's Pesticide Programme in Costa Rica (cited in McWhirter & Gallagher, 1998: May 3), said she and other scientists complained about Aldicarb to banana growers for years, but nothing was done:

> Aldicarb was very popular, but it was causing a very high number of pesticide poisonings to workers, and it was also causing fish kills and other problems here ... We had already pointed out this problem with Aldicarb, but nothing had been done. It was only in the moment that the residue appeared in the fruit that immediately they [the growers] stopped using Aldicarb.

In 1990, the EPA banned Aldicarb, after excess levels were detected in bananas (MIRENEM, 1992; McWhirter & Gallagher, 1998: May 3).

c) The Continuing Significance of Chemicals in Banana Production

The official banning of chemical products does not represent the end of problems of chemicals used in banana production. García (1993, cited in García & Chacón, 1995:75) reports that despite legal measures banning agrochemicals, Costa Rica spent approximately $12.5 million U.S. between 1989 and 1992 on importing prohibited agrochemicals, including several classified as part of the 'Dirty Dozen', by the Pesticide Action Network. In addition, although DBCP and Aldicarb are now banned, their replacements are also highly toxic. All of the nematicides in current usage are listed by the World Health Organization (WHO) as being either highly or extremely toxic (MIRENEM, 1992; Sierra, 1993). DBCP and Aldicarb were the tip of the iceberg of toxic chemicals used in banana production.

The human and environmental costs of the massive chemical use associated with the banana industry are not generally considered within the scope of 'profitability'. Although the court case against DBCP use represents an important victory, all chemicals used for combating sigatoka and nematodes are highly toxic, yet their effect on humans and the environment has not been questioned. Research efforts into genetic engineering represents one approach to addressing these

problems. However, as will be discussed in later chapters, these efforts are largely because the expense of the chemicals represents a significant proportion of production costs. There has been virtually no attempt to address the fundamental problem of the vulnerability of mass-produced, monocropped, cloned bananas. In that sense, genetic control of banana pests and diseases diverts attention from direct scrutiny of the environmental and health effects of current practices for banana production.

The problematic effects of chemical use in banana production are much broader than simply direct contact with the chemicals. Approximately 20% of fungicides are lost to drift and do not reach the banana plantations (Hernández, 1997:80). Further, because high levels of rainfall can rot banana plants, drainage canals transport excess water from banana plants eventually into local river systems and the ocean. This drainage efficiently transports the chemicals used in banana production into local water supplies and a wide range of ecosystems. The toxic effects of the chemicals on fish have already been noted. The issues surrounding banana production techniques and their environmental and health effects will be further examined in chapters 9 and 8, respectively.

2. Costa Rican Responses to Pressures for Environmental Sustainability

Costa Rica has a strong interest in sustainable development. In 1990, the Ministry of Natural Resources, Energy and Mines released their *Strategy of Conservation for Sustainable Development in Costa Rica* (MIRENEM, 1990). Many organizations have opened offices in Costa Rica, providing education, research and

political pressure on behalf of virtually every aspect of the environment. Also, Costa Rica has become a premier destination for ecotourism in virtually every shape and form. Banana companies are feeling pressure for environmental sustainability not only from within Costa Rica, but also from their head offices and buyers. In recent years there has been pressure also from social-activist groups, the most active and vocal of which are European-based, although there are also Costa Rican and North American agencies.

Costa Rica and the banana transnationals are now responding to these pressures for several reasons. Most importantly, ecotourism has joined banana and coffee production as part of the backbone of the Costa Rican economy. Environmental destruction, or even the image of environmental destruction, has the potential to undermine two of Costa Rica's three largest industries. A recent increase in media attention to environmental issues, in part because of international social-activist groups, has intensified the pressure. The focus directed toward the transnational banana producers is especially strong because of their history of environmental destruction, which is fairly well known in First-World countries where the vast majority of their bananas are sold.

In Costa Rica, the banana industry has responded to these pressures with a strategy of image management, and the implementation of environment-conscious changes. There is, however, some difficulty in determining to what extent any given change fits into these categories. With this difficulty noted, I will now discuss some of the industry changes oriented towards environmental sustainability.

The environmental reforms of the transnationals tend to be very visible. They now employ environmental managers or coordinators, who present pamphlets on "Dole (or Chiquita) and the Environment," or to discuss their new environmentally-friendly image, their plastic recycling programmes, or their secondary forest reserves. Corporate posters with environmental themes hold prominent place in all of the transnationals' offices and on their web sites.

The visibility of this image management, however, does not represent a fundamental change in the traditional neo-liberal ideology by which banana transnationals, in their role as agents of development, demand governmental non-interference. A common response to this view is that the transnationals are the best means for implementing environmental and social measures because they have both the necessary capital and the environmental and social conscience. He argues that their ability to act on this conscience is impeded by the government through taxes and laws that limit transnationals.

Despite their "environmental consciences" and apparent reforms, there are serious problems with accepting the banana industry and transnationals' environmental claims at face value.

a) Expert Report Repressed, then Dismissed

In 1991, the Costa Rican Ministry of Natural Resources, Energy and Mines (MIRENEM) and the World Conservation Union (UICN) co-authored a social and environmental impact assessment of the expansion of banana production into Sarapiquí, Tortuguero and Talamanca regions of the Atlantic zone (cited as

MIRENEM, 1992). The World Conservation Union is one of the oldest and most well-respected international conservation groups, with conservation projects in both developed and underdeveloped countries. The report was sparked by concern over the massive increase in banana production in the Atlantic zone in anticipation of increased access to the E.U. markets. The report was extremely critical of many aspects of the industry, from deforestation, chemical usage, solid waste, and pollution of rivers and soils, to unemployment, migration, and higher land prices. The goal of the report was to raise awareness of these issues among government officials, the public and the banana industry leaders.

According to McWhirter and Gallagher (1998: May 3), the MIRENEM/UICN report was suppressed for years because of criticism and pressure by the banana industry. Enrique Lahmann, the regional director of the World Conservation Union (cited in McWhirter & Gallagher, 1998: May 3), explains that American banana interests, which have operated in Costa Rica for more than 100 years, applied their political influence to hold the report back: "There is no question that the banana industry has a lot of weight in national politics in Costa Rica."

In 1993, when parts of the report were leaked, the banana industry set up the Comité Ambiental y Social (Environmental and Social Committee) to coordinate the industry's response. This committee is comprised primarily of management from the transnationals and the industry associations (CORBANA, ANAPROBAN, for independents; La Cámara Nacional de Bananeros for transnationals). As will be

discussed further in the next chapter, there is a high degree of homogeneity between executives of the transnationals and of industry associations.

After a new political administration came into office in 1996, the report was released in early 1997. The Social and Environmental Committee's official response to the report was that the environment minister should not view the report as up-to-date, but merely a historical document. As such, it should not be considered relevant to current policy decisions for the banana industry (McWhirter & Gallagher, 1998: May 3). When McWhirter and Gallagher (1998: May 3), asked the Costa Rican embassy in Washington D.C. if the government endorsed the report, it sent the Enquirer an old press release from CORBANA condemning the report. Chiquita's response, presented through its attorneys, was that the World Conservation Union report was "unbalanced" and "not based on scientific method but, instead, solely on casual observation" (McWhirter & Gallagher, 1998: May 3). The report, more than a hundred pages long, involved well-qualified and respected Costa Rican and international academic and technical experts. It included extensive statistical analyses, graphics and satellite data.

b) Inaccessibility of the Transnationals

Researchers who have been working in Costa Rica for the last decade confirmed that the transnationals are virtually impenetrable by independent researchers. One example is offered by professor T.E. Lacher Jr. from Texas A&M, who recently co-authored two papers about agrochemicals in the banana industry. Lacher said the industry is defensive on the pesticide issue and that the authors tried

to get the multinational companies to cooperate, but could not get anyone to talk with them: "We didn't publish the industry perspective, but you can't get access to industry information. ... If everything is proprietary, there's nothing we can do about it" (cited in McWhirter & Gallagher, 1998: May 3).

Another example stems from my personal experience. I originally intended a comparative study of a transnational and an independent banana plantation. In the end this was not possible because of the transnationals' refusal to grant permission to study their plantations. I was also denied access to visit meetings of the Social and Environmental Committee, although I was informed that the committee would answer any specific question I might have. An industry executive informed me, though, that despite its weekly meetings, the committee has lost steam since its inception. This decline is not unexpected if the original impetus for the Committee was to create a unified industry response to external environmental pressures associated with the MIRENEM/UICN report.

According to individuals who have worked in the banana industry for decades, my experience was not uncommon. A corporate environmental spokesperson who sits on the Social and Environmental Committee told me, as did others, that the reason for the transnationals' reluctance to allow access to information is that in the past, they have received negative publicity from researchers, especially those from First World countries (personal communications). For example, several individuals mentioned Bourgois' (1989, 1994) study on ethnicity and racism in the banana industry by name as justifying their closed-door

policy toward researchers. The Spanish edition of Bourgois' book had become available in Costa Rica just prior to my field period. Thierry Liscot of CATIE (Centro Agronómico Tropical de Investigación y Enseñanza, the Research and Teaching Centre for Tropical Agronomy) informed me that the Bourgois study had effectively closed any cracks that had been previously available to researchers, and that now even with good contacts there is virtually no hope of access. Ramiro Jaramillo, Regional Coordinator of the Latin American and Caribbean division of INIBAP (the International Network for the Improvement of Banana and Plantain) confirmed this statement. He advised me not to waste any time trying to gain access into the transnationals: "they're fine when you talk to them, but once something goes on paper, forget it."

The experience with the transnationals is in contrast to my experience at Calarcá, where I did my primary fieldwork, and on Oscar Cruz's organic banana plantation. At Calarcá, an independent plantation, I was accepted and invited to be present for any aspect of production, in the fields, the packing plant, or closed-door management meetings. My experience with Oscar Cruz, although brief, was similar.

This closed-door policy and high levels of publicity have made it more difficult to assess environmental reform within the industry, and in particular within the transnationals. Concealment of information appears to be an intentional strategy of the industry. For example, I asked a corporate environmental coordinator whether environmental test results were made available to the public or whether researchers could get permission to do their own tests. His response was

that this was impossible because "once you open the door a crack, and researchers get a foot in the door, in the end they're into everything and you can't do production."

McWhirter and Gallagher (1998: May 3) documented a similar situation with Chiquita Brands International in Honduras. In 1995, the Honduran Centro de Estudios y Control de Contaminantes (the Center for the Study and Control of Contaminants) audited the banana industry throughout Honduras, including Chiquita plantations. Dr. Luis Munguia Guerrero, CESCCO's director, said the audit found serious problems on Chiquita's farms, but he said he could not release the report because of a confidentiality agreement signed with the company. Apparently, however, Chiquita could release it if it chose. However, when requested to do so by McWhirter and Gallagher, the company refused.

Luisa Castillo, from Costa Rica's National University Pesticide Programme argues that the transnationals "are always saying that hard data can affect them in the international market. ... So if it is known that there are pollution and health problems, then people won't want to buy the product." Therefore, she argues, the transnationals resist independent scientific studies on their plantations because they don't want the public to know: "They don't want us doing any research. ... For example, water pollution. It is better [for a company] to suspect that the water is polluted than to know that the water is polluted" (cited in McWhirter & Gallagher, 1998: May 3).

c) ECO-OK and ISO 14000: Better Bananas?

One important response to environmental pressures has been the 'ECO-OK' certification programme, begun in 1991, sponsored by the Rainforest Alliance and the Fundación Ambio, a Costa Rican environmental organization. In its English-language literature, Chiquita refers to this as the 'Better Banana' programme. This project established a series of practices designed to diminish the environmental impacts of banana plantations according to standards developed by various environmental organizations and representatives from the industry (Salazar, 1994; Chiquita documentation; personal communications).

The ECO-OK/Better Banana programme was started in Costa Rica, where it is most active. However, it is important to note that not all Latin American countries participate. Ransom (1999) reports that in his investigations throughout Central America, and particularly Guatemala, he neither encountered the ECO-OK/Better Banana programme, nor had any of his contacts heard of it. In fact, although the programme was initially intended to be industry wide, Chiquita quickly dominated it. According to Connie Smith, Chiquita's Central American environmental coordinator until 1996, Dole and del Monte bowed out of the programme because it became an issue of competition among the transnationals, which would not cooperate. In material and advertisements in the United States and Europe, Chiquita has been quick to use its Rainforest Alliance certification to link its products to environmental safety (McWhirter & Gallagher, 1998: May 3).

To receive ECO-OK certification a plantation must pass inspection annually in the following five areas: 1) Management of Hazardous Materials; 2) Integral Waste Management; 3) Occupational Health and Safety; 4) Water Monitoring; 5) Ecosystem (Salazar, 1994; Chiquita Documentation; personal communications). After visiting a plantation with ECO-OK certification and speaking with the corporate environmental spokesperson, it was clear that certain aspects of the programme were far superior to what I had seen at non-certified plantations. Worker protection from chemicals and the handling of waste materials were commendable, and there were pockets of increased environmental awareness. The former particularly represents an important change since the impact of chemical usage on workers is significant, as discussed earlier with respect to DBCP.

Several criteria, however, were misleading. For example, certification requires that all workers and their families have access to medical attention and facilities, although this requirement is already covered by Costa Rica's national health care system. With respect to reforestation and conservation, degraded or abandoned areas on plantations are to be eliminated. However, banana companies typically purchase only land that can be intensively cultivated. Similarly, plantation lands have typically been deforested previously for cattle grazing; thus decreasing deforestation on plantation lands is, for the most part, a moot point.

There are also concerns with the certification process and its links with Fundación Ambio. According to Eric Holst, New York coordinator of the ECO-OK/Better Banana programme, a certification fee is paid directly to Fundación

Ambio. Fundación Ambio performs the ECO-OK inspections. In 1998, Fundación Ambio had a budget of U.S. $312,000, about 25 percent of which can be attributed directly to Chiquita's ECO-OK fee payments. According to Connie Smith, a former Chiquita environmental coordinator, the connection between Chiquita and the Rainforest Alliance "does have a tendency to make people wonder" about the programme's validity, and that the programme "needs to be re-evaluated" (McWhirter & Gallagher, 1998: May 3).

Charging a fee to cover the costs of certification bars independent plantations, which, unlike the transnationals, do not have access to large capital resources. Don Jaime, the administrator of finca Calarcá explained that although he would be generally interested in pursuing environmental certification, that costs were a clear determining factor, both in terms of fees, but also for the implementation of the environmental measures required by the programme.

A link between Chiquita and another environmental group was also questioned. In 1996, the Washington-based environmental group Conservation International sent a team of eight environmental experts to visit its certified farms in Costa Rica and Panama. It declared Chiquita's environmental efforts as "an innovative system that looks for environmental improvements in the effects of monocultures (single-crop farms), serves as a guide for the establishment of environmental measures, and promotes gradual changes in land use practices. This program should be continued and supported for its goals." An illegally obtained

voice-mail tape from Chiquita indicated that Chiquita paid Conservation International to complete this study (McWhirter & Gallagher, 1998: May 3).

ECO-OK certification requires annual re-inspection by Fundación Ambio, but spot checks can also be conducted. According to Holst, between one and 10 spot checks per year are conducted (cited in McWhirter & Gallagher, 1998: May 3). However, when I visited an ECO-OK-certified Chiquita plantation, the public relations manager informed me that in the previous year there had been no spot checks, and that managers are often informed the week prior to an inspection in order to facilitate scheduling arrangements[2].

Holst (cited in McWhirter & Gallagher, 1998: May 3) reported that no certified plantation has ever had its certification revoked for violations. He explained that if inspectors find violations, plantation managers are notified and asked to correct the problem. Holst also stated that information about inspections and violations is proprietary and not available to the public. The public relations manager at an Eco-OK-certified Chiquita plantation, and a corporate environmental spokesperson confirmed this statement.

The most serious concerns with the ECO-OK criteria are in the areas of chemical usage and water monitoring. Despite the fact that chemical pollution is considered the primary environmental concern in banana production, the ECO-OK certification criteria make no demands for decrease or alteration of the types of chemicals currently used (MIRENEM, 1990; MIRENEM & UICN, 1992; García &

Chacón, 1995; Lizano & Murillo, 1991; Chacón & Hernández, 1994). The water monitoring criteria require tests for "bacteria, physical-chemical, and pesticide levels" of the potable water supply and runoff water. However, there are currently no tests available for pesticide levels. A corporate environmental spokesperson confirmed this, but had no comment.

Further, the criteria do not address issues such as the impact on biodiversity due to monocropping. Single-crop farming is an important issue in Costa Rica because of its great climatic diversity, which includes twelve distinctive ecological life zones, or bioclimates, as well as numerous microclimates in which the weather, terrain, soils and vegetation can change noticeably within as little as five or ten kilometres (Hall, 1991:18; Tropical Science Center, 1982:10). The biodiversity associated with the regions in which bananas are produced is internationally famous. It is considered the wealth of the Costa Rican rainforest, and is the basis for ecotourism, for world-class scientific research, and for several biological preserves (Vandermeer & Perfecto,1995:5). The threats to biodiversity become increasingly important as banana production is pushed into new regions, such as Sarapiquí.

According to many of my corporate informants, the real environmental problem lies not with the transnationals but the independents, which have neither the "environmental conscience" nor the financial means to implement environmental measures. This was certainly true at Calarcá, where plastic garbage was burned, and no measures for environmental protection were in place. By the

[2] I visited this plantation as part of a student group tour, and therefore managers did not know that I was doing

year 2000, Chiquita boasted ECO-OK certification of all of its Costa Rican plantations. However, Chiquita's 100% certification does not include those independent plantations that supply Chiquita, and whose bananas sport the Chiquita sticker (Chiquita documentation; personal communications). When I asked Chiquita's environmental coordinator whether Chiquita had any responsibility for the environmental impact of its independent suppliers because they are producing Chiquita brand bananas, he responded that "ECO-OK certification is for the production processes only and not for the fruit itself, ... [and that] the Chiquita name itself implies quality and care for the environment."

The distinction between certification of the production process and the product is an important point. Focus on the process draws attention away from the bananas produced by independents but marketed under the Chiquita label, and from the degree to which the bananas themselves may or may not be 'environmentally acceptable'.

Limitations in certification of the production process can also be seen with respect to ISO 14,0000 series certification for the 'environmentally-friendly' production of bananas. In 1998, Standard Fruit and several other banana companies operating in Costa Rica received certification of compliance with ISO 14,0000 series (EIU, 1998, 3:18). The ISO, the International Standards Organization based in Geneva, has been developing voluntary technical standards for business, industry and technology since 1947. The standards contain technical specifications or other

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research on the industry.

precise criteria to be used consistently as rules, guidelines, or definitions of characteristics to ensure that materials, products, processes and services are fit for their purpose. ISO 14000 series standards were created in 1996 because of ISO interest in sustainable development objectives discussed at the United Nations Conference on Environment and Development in Rio de Janeiro, in 1992. ISO 14000 is primarily concerned with the way an organization goes about its work in relation to the environment, and not directly with the result of this work. In other words, the ISO standards, like the ECO-OK criteria, concern processes, and not products.

In addition, the requirements of the ISO 14000 are not specific to the banana industry, but apply to any business wishing to establish an environmental management system. ISO 14000 provides a generic framework for an overall, strategic approach to any organization's environmental policy, plans and actions. The underlying philosophy is that the requirements of an effective environmental management system are the same, whatever the business. This broad definition is only possible because the standards do not specify levels of environmental performance. The ISO explains that:

> the standards can be implemented by a wide variety of organizations, whatever their current level of environmental maturity. However, a commitment to compliance with applicable environmental legislation and regulations is required, along with a commitment to continuous improvement – for which the environmental management system provides the framework (ISO documentation).

The ISO 14000 certification is therefore primarily based on processes, objectives, policy intentions, and corporate good will. Compounding the problem of loose definitions is an irony: ISO standards are developed by experts provided by

business sectors most interested in those standards (e.g. the banana industry itself). It seems unlikely that the ISO could back up its claim that the ISO 14000 standards "are management tools that will help your business achieve environmental goals that go way beyond acquiring a mere 'green sheen'" (ISO documentation).

3. Conclusion

In summary, Cavendish varieties were developed because Panama disease threatened the profitability of banana industry. The introduction of the Cavendish banana was a calculated, profit-oriented decision. Profit came with costs associated with delicate fruit vulnerable to nematodes and Sigatoka disease. These costs were, for the most part, calculated and anticipated by the banana companies. Furthermore, although they entailed a complete transformation of the transportation process, as well as increased production costs associated with the massive application of chemicals, these costs were considered manageable given the profit margin associated with the banana export business.

The introduction of the Cavendish banana was a clear victory for the banana transnationals, but also for the chemical companies and for consumers of export bananas. Following world systems theory, it is not surprising that all of these are based in First World countries, primarily in the U.S. and Europe.

International influences have been instrumental in driving both chemical use, and environmental reforms within the industry. As a result, there have been some changes, with the banana industry becoming more environmentally sustainable. The transnationals have been much more active in this respect than have the

independents. The ECO-OK certification programme, for example, has clearly made Chiquita more progressive, especially in areas of recycling and in worker protection.

However, the ECO-OK criteria are insufficient in the areas of chemical use and water pollution, and are unable to address the threats to biodiversity caused by monocropping and increased production, issues of primary concern. Furthermore, only Chiquita is participating in the ECO-OK programme; at present, there is no inclusion of independent suppliers. In addition, it appears that the ISO 14000 is unlikely to provide any significant environmental protection. Behind all of this are the powerful transnationals, which present an image of corporate responsibility and virtue, while effectively suppressing scientific research and scrutiny into environmental issues associated with the banana industry.

In addition, it is clear from examining the cases of DBCP and Aldicarb that international influences for the control or elimination of chemicals used in banana production are strong. But these international influences are not sufficient to address all issues associated with chemical usage on banana plantations. A most powerful international influence is the extremely high demand for a constant supply of cheap, cosmetically perfect bananas.

DBCP use continued in Costa Rica after it was banned in the U.S., even though its toxicity was well demonstrated. On the other hand, it was the U.S. courts which finally found in favour of the workers in the court case against the chemical transnationals. Nevertheless, this legal finding and its minimal compensation are insignificant in relation to the effects of chemicals on thousands of people who live

and work in banana-producing regions. According to Vandermeer and Perfecto (1995:6), the DBCP case is an example of the fact that "the banana companies have not accepted responsibility for the health and safety of their workers, the community, or the environment."

The driving factor in banning Aldicarb was the presence of chemical residue on the fruit, which posed a risk to U.S. consumers. The U.S. Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA) clearly have more influence on the banana industry than do those in Costa Rica's pesticide programme, who had been complaining about Aldicarb for years. But the FDA and the EPA acted only through concern for U.S. consumers, and not for Latin Americans. According to Professor Scott Witter at Michigan State University's Institute of International Agriculture, most applied pesticides show up in FDA banana sampling, but virtually always within safe amounts for consumers. But these same pesticides threaten the health of the thousands of people working on or living near the banana plantations. According Witter (cited in McWhirter & Gallagher, 1998: May 3):

> The people who tend to take it on the nose are the Costa Ricans or the Hondurans or the Ecuadorians who work on the plantations when they are doing the spraying. ... They're in the field. Their water supplies get contaminated. Their kids play in the dirt that's contaminated that day. I've yet to witness a really wonderful program where they say, OK, we're spraying today, everybody needs to stay inside.

## Chapter 7: Transnational Power and Quality Control at the Micro Level

The previous two chapters examined and analyzed macro aspects of the banana industry. These analyses demonstrated the importance of several features for understanding the banana industry. These are: 1) transnational power; 2) market oversupply exacerbated by the 'Banana Blunder'; 3) capitalist value on competition and profit; 4) chemically-dependent bananas; 5) limited pressure for environmental sustainability. These macro features have significant implications at the micro level in that collectively, they have shaped the Costa Rican banana industry into its current form. The following three chapters articulate the consequences of the macro features on the micro level: Chapter 6 focuses on how macro features of the banana industry are manifested with respect to transnational power and quality within the Costa Rican banana industry and on the plantation. This will be followed by two chapters which examine further consequences of the macro features of the banana industry: Chapter 7 will examine worker conditions, resistance and change on the plantation, and chapter 8 will examine environmental degradation and underdevelopment beyond the borders of the plantation. In this way, each of these chapters explores the various consequences of the banana industry at the macro level for the micro level.

The current chapter initially examines transnational power at the micro level within the Costa Rican banana industry generally, and then studies the organization and implementation of quality control on plantations. Quality control expresses the macro features of the banana industry very well: it is one of the important

mechanisms of transnational power, and involves chemically-produced bananas along with a lack of pressure for environmental sustainability. Finally, emphasizing quality control at the micro level stems from the current market oversupply, and a political-economic context oriented towards profit and competition. Macro issues of the banana industry are thereby manifested on the plantations partly through heavy emphasis on quality control. This emphasis is reflected in the social organization of production, as well as in the linked system of production practices. These issues will be further examined in the second section of this chapter. An introduction to the physical and social organization of production at finca Calarcá can be found in the appendix.

1. Local Articulation of Transnational Power in the Costa Rican Banana Industry

One theme central to the macro analysis of the banana industry is the power of the transnational banana companies. As discussed, Chiquita Brands International, Dole (Standard Fruit), and del Monte (Bandeco) are all active within the Costa Rican banana industry. This section begins with a brief overview of these main players, in order to highlight their participation and roles. The increase in banana production from the mid 1980s to the early 1990s saw a proliferation of independent plantations. However, as will be discussed in this section, the rise of the independents within the Costa Rican banana trade did not diminish the power of the transnationals. This power is articulated variously, both at the national and plantation levels, to demonstrate the breadth and length of transnational power in the banana industry.

a) The Main Players in the Costa Rican Banana Industry

The main players in the Costa Rican banana industry are the marketing companies, the producers and the three industry associations. Three transnationals dominate the marketing companies responsible for exporting and marketing of the fruit: Chiquita Brands International (whose banana subsidiaries in Costa Rica are the Compañia Bananera del Atlántico (COBAL) and the Chiriquí Land Co., which spans the Panama-Costa Rica border), Standard Fruit (Dole brand), and del Monte (with its subsidiary The Banana Development Company or BANDECO). In 1997, just over 80% of all bananas were marketed through these transnationals (CORBANA, 1997). Several Costa Rican companies market the remaining 20%, but often contract the banana transnationals for transportation of the fruit.

Transnational marketing companies usually have their own plantations, as well as having contracts with independent plantations, which are usually Costa Rican (or Latin American) owned. The few Costa Rican marketing companies do not have their own plantations. Thus, plantation ownership is limited to transnationals and independents. Independent plantations average between 40% and 60% of all export production. The remainder is produced on plantations owned by transnational-owned marketing companies.

The industry has three different organizations: CORBANA (previously ASBANA), ANAPROBAN, and La Cámara Nacional de Bananeros (CNB). CNB and ANAPROBAN represent the transnationals and the independent producers, respectively. Although the associations and the transnationals officially have clear

and distinct roles, in practice certain individuals tend to rotate through management positions of both the organizations and of the transnationals. These individuals, who generally serve on various committees and frequently interact with each other, are largely responsible for industry policies and practices, with the consequence that their informal social relations play a significant role in the decision-making processes employed by these associations. Although this situation is not extraordinary in itself, the high degree of homogeneity at the most powerful level of the industry is worth noting.

Formed in 1971, CORBANA, formerly called ASBANA, was Latin America's first national banana association. ASBANA was conceived as a semi-autonomous organization whose board of directors is made up of the State, the Central Bank, and producers (transnationals and independents). The organization was funded, in part, from export taxes. ASBANA was unique from other national banana associations in that it was not located within a governmental ministry.

ASBANA's original purpose was to provide short-term assistance to plantations in need, an especially critical role for independent plantations struggling to survive in difficult economic conditions and with a virtual oligopoly of transnationals in the industry. This role of was later taken over with the formation of ANAPROBAN. ASBANA, and later CORBANA, provided assistance to increase productivity, and to improve plantation administration and production techniques. Financial incentives were also offered to increase area in production and to increase productivity. These objectives were achieved, in part, through two Banana

Development Plans (Plan Fomento Bananero). ASBANA also played a key role in establishing, and later increasing, a per-box export tax dedicated to Sigatoka disease control.

CORBANA, a private corporation funded and run by the transnationals and independent producers, coordinates their interests as well as those of the Costa Rican government. At present, the association compiles banana production data and is associated with the functioning of the industry as a whole. CORBANA also owns a marketing company, DIFRUSA, the largest marketing company of independent plantations.

Interestingly, no government agency or group specifically addresses the broad national issues associated with the banana industry. Following queries at the Ministry of Agriculture, I was eventually directed to a manager in the Directorate for Commercial Negotiations. I was informed that no ministry of the government was specifically involved in the banana industry because that would duplicate the functions of CORBANA. Furthermore, I was told that the government has been involved in some agricultural production, such as the onion industry, with disastrous results, and that, "the banana industry functions very well and so why should the government get involved?" When I suggested that there might be issues related to the banana industry and national development, the response was that this was the role of CORBANA. However, in a lengthy interview, a CORBANA executive clearly stated that the association's role is solely to act as an intermediary between producers and the government. Yet at the same time, CORBANA

documents and literature portray it as an industry leader and as an agent of Costa Rican development.

This confusion of the roles of the government and of CORBANA is related to another key issue. Specifically, the importance of the banana industry to national development has led to its superseding some of the state's control over issues of national development. That is, the conflation of the roles of the government and of CORBANA is further evidence of the usurpation of the state's control over issues of national development. This is problematic because CORBANA and the banana industry have not taken on all development issues associated with the banana industry and Costa Rican development. The weak role of the state with respect to the banana industry has been documented both by Jansen (1998), and by the Foro Emaús, which makes far stronger assertions. Bermúdez Umaña and Barrantes Cascante refer to the government as "accomplices to the business sector strategy against the banana workers and their organizations" (Foro Emaús website).

Within this framework, the transnationals hold exceptional power, largely due to their high level of industry activity. The following section discusses how the transnationals both produce bananas on their own plantations, and contract out production to independent producers. Between their productive roles and their active participation in various associations and committees, the transnationals are well represented in virtually all aspects of banana production, marketing and export in Costa Rica. It should be recalled that one of the nicknames of the UFCO, which

historically defined these relations of production, is 'the octopus' (el pulpo), because it had its tentacles entwined in virtually all aspects of Costa Rican society.

b) Increase in 'Independent' Plantations

As discussed in chapter 3, the primary model of production throughout the history of the banana industry in Costa Rica was the monopoly (and later oligopoly) of the transnational plantation. The United Fruit Company (UFCO, later United Brands, and most recently Chiquita Brands International) perfected this model of extreme vertical integration and penetration at the level of the nation-state, which gave rise to the term 'banana republic'. Bourgois' (1989, 1994) analyses demonstrate how, in this model, exploitation of various ethnic groups played an important role in the relations of production. In Costa Rica, the UFCO was the sole exporter of bananas until 1956, when Dole (Standard Fruit) began cultivation. Although competition increased over the decades following (largely among transnationals), the basic United Fruit Co. model changed very little (Bourgois, 1989, 1994; Gaspar, 1979; Soto, 1992; Moreira Ramírez, 1993; Kepner & Soothill, 1935).

However, from the mid 1980s to the early 1990s banana production increased dramatically, in anticipation of increased access to European markets. It was erroneously assumed that the creation of the European Union would result in decreased protectionism of European banana-producing former colonies and protectorates. This increase in production was reflected in an increase in production on independent plantations. In 1980, 19.5 million boxes were produced on independent plantations in Costa Rica; by 1995, production had grown to 55.5

million boxes. This production surge fit well with Costa Rica's push to encourage national producers with their Banana Development Plan (Plan Fomento Bananero), financed by the National Bank of Costa Rica, and CORBANA (at that time called ASBANA). They provided financial support and massive loans for the development of new national plantations and marketing companies.

The dramatic increase in the number of independent producers is often presented as heightened national control over the banana industry, but that is not the case. Not all the independent producers were Costa Rican; many Colombian plantation owners, unable to increase their exports due to quota limitations, sought to produce in Costa Rica. Such was the case of the owners of finca Calarcá, for example.

However, the most important evidence that the increase of independents did not represent an increase of national control over the industry is that the underlying power base of the transnationals remains intact, in both their roles as producers and as marketing companies. In 1995, 48% of all export boxes came from transnational plantations, and in 1997, 81% of all boxes of bananas were marketed through transnationals (CORBANA, 1997, interim). The remaining approximately 20% are marketed through several Costa Rican marketing companies. However, these national marketing companies do not own ships, and must contract transportation with the transnational marketing companies, who do. Thus, the transnationals still transport all Costa Rican bananas, irrespective of whether they come from transnationals or independents. This represents another avenue of transnational

power. Further, as noted above, the transnationals are also prominent in the industry because of their dominance in various associations and committees.

c) Arenas of Transnational Power as Marketing Companies

The relationship between transnational marketing companies and independent suppliers provides significant examples of transnational power. "Independent" plantations depend on marketing companies not only for transport and marketing of the fruit, but also for the purchase of materials such as banana stickers, cardboard, and sometimes, depending on the company and the contract, even pesticides and fertilizers. Further, as marketing companies, the transnationals articulate their power through: 1) maneuverability in the market; 2) oversupply and quality control; 3) sigatoka disease prevention; 4) the transnational quality control inspector. Each of these is examined in further detail below.

i) Maneuverability in the Market

The transnationals gain substantial power due to their ability to manipulate and control the market, as well as the 'independent' plantations, to their benefit. The independents play several key roles in increasing power for the transnationals. First, independents absorb much of the risk and cost of plantation development. During the production increases the 1980s and 1990s, many of the new plantations were developed on marginal lands, which increased both development production costs. These increased costs resulted in lower profit margins, which were shouldered mostly by independents, and not the transnationals.

Second, the independents absorb the costs of market fluctuations for the transnationals. Bananas, produced year-round, have no distinct harvesting season. There is a slight annual variation in production, based not on the geographic conditions of the producing regions, but rather on those of the importing regions. That is, when local fruit is available in North America and Europe, there is smaller demand for bananas, and therefore production levels diminish. Conversely, the European and North American winter creates a higher demand for bananas, and production increases. The costs of these seasonal variations tend to be absorbed by the independents.

This scenario also applies to larger-scale market variations and fluctuations. Independent plantations produce, depending on the year, between 40% and 60% of all boxes for export. Most independents have annual contracts, and therefore the transnationals can alter terms, such as the price paid per box, or the number of boxes to be purchased. In addition, they can fail to renew the contract altogether.

In 1999, for example, market oversupply resulted in decreased world prices for bananas. This oversupply, although chronic, was exacerbated by decreased demand from emerging markets such as China and Russia. Further, Ecuador, the world's largest producer, which also has cheaper production costs than Costa Rica, sharply increased production. As a result, Costa Rican exporters had to cut prices to try to remain competitive in the world market. This price cut was passed onto producers, particularly independents, some of whom feared they could be forced out of business (EIU, 1999, 3:19-20).

The independent plantations bear both the risks and costs of plantation development, and the costs for market variations, not transnational plantations. The transnationals have vertical integration of the banana industry, vast national resources, international financial assets, and a network permitting great mobility, which afford them a great deal of power. This power can clearly be seen in their negotiations with the Costa Rican government, faced with debt and the risk of increased unemployment should banana production be shifted out of Costa Rica.

ii) Oversupply and Quality Control

Market oversupply plays an important role in maintaining the transnationals' power. Oversupply has been a chronic condition of the international banana industry, but it was exacerbated by the massive increases in production associated with the 'Banana Blunder', because it was not balanced by increased demand. Oversupply has contributed to the dependence of independent plantations on transnational marketing companies, because the independents compete with each other for contracts with the transnationals in order to sell their fruit. Transnational contract negotiations with independent producers clearly demonstrate their power. Contracting to independents in a context of oversupply also affords the transnationals flexibility to shift production to plantations with higher quality fruit, or with fewer labour problems, or to move production to a more profitable region or country.

Market oversupply also provides the rationale for maintaining a focus on quality control, an important basis for transnational power. This power is manifested in several ways.

Quality control is used as a barrier to entry. In Costa Rica, the banana industry offers the highest pay for unskilled work, which contributes to the relatively high production costs in Costa Rica, compared to other banana-producing countries where wages are much lower. Therefore, rather than competing on the global market with low-cost bananas, Costa Rica's competes with high-quality bananas. This better quality is achieved primarily through the intensive use of technology and chemicals, and transnational plantations have more capital and financing options to invest in such technology. For independent plantations these financial resources are much harder to come by. Independent plantations may not, however, opt out of chemical and technological production, because marketing companies require these "modern and productive" techniques as a condition for contracting with independent producers to buy their fruit. This condition is sometimes articulated through 'productivity levels.'

Further, technological and chemical production expenses effectively undermine the viability of any plantation of less than 100 hectares, representing a substantial barrier to entry into banana export production. Cultivation for the domestic market is not viable because it is impossible to compete with the 'free waste' bananas caused by high quality standards associated with export bananas. Maintaining these strong barriers to entry is one strategy employed by the

marketing companies, specifically the transnationals, for controlling the market and eliminating competition.

The intense competition among independents for marketing contracts results in a strong focus on quality control. Independent plantations must keep the quality of the fruit high in order to have a consistent buyer. Marketing companies thus have substantial power over independent plantations' production processes because of this competition in a context of oversupply. This power is evident in a number of ways, two of which are sigatoka disease control and the transnational quality control inspector.

iii) Sigatoka Disease Prevention

As discussed in chapter 3, sigatoka disease represents one of the most significant challenges to Cavendish varieties of banana. Currently, the only effective sigatoka control is application of various chemical fungicides, primarily through aerial spraying. In Costa Rica, like many other countries, plantations must be sprayed for sigatoka in order for the fruit to be sold for export (Sierra, 1993). Transnational producers own and operate their own planes and spraying equipment, but this is not affordable for most independent producers. As a result, most independent producers contract the transnationals to provide these services. In theory, independent producers are free to choose among the companies for sigatoka control. In practice, however, the quality of the fruit is highly controlled by the marketing company which buys the fruit, and the quality of the fruit is largely determined by the control of sigatoka. Therefore, according to Hernández (1997:78),

"to avoid quality problems and to ensure a good service, many independent producers consider it more convenient to contract with the transnationals the planning and implementation of control programs for their plantations". Sigatoka disease prevention thus benefits the transnationals both through the provision of aerial spraying, and also in the resulting increased quality. This is another means whereby the transnationals control the production processes of 'independent' plantations.

iv) The Transnational Quality Control Inspector

The most significant control mechanism over independent plantations is the transnationals' quality control inspector, who is present at the plantation on most cutting days. Officially, the transnational inspector oversees the packing plant and ensures that cutting conditions are met and quality standards are adequate. In practice, however, the quality control inspector goes well beyond his role as overseer, as demonstrated by the following examples from finca Calarcá.

Calarcá was a supplier to Dole (Standard Fruit), and the quality control inspector for most of my field period was named Israel. As is the case with most independent producers, the owners and administrator of Calarcá were anxious to maintain a long-term supply contract with Dole, which is not a straightforward process in a context of market oversupply. Israel was the link with Dole, and therefore his satisfaction with Calarcá was important. This good opinion was complicated by the fact that Israel's purview went beyond the simple verification of completion of the cutting order and adequate quality standards. Israel was

concerned with virtually all aspects of production at Calarcá, including everything from field techniques to management style. On the surface, his interest stemmed from the fact that all these aspects of production bear on the quality of the bananas and on Calarcá's reliability as a Dole supplier.

Calarcá differed from the norm in several production techniques, all of which came under scrutiny by Israel. For instance, the cut hands of bananas are hung on the cable via with the cut end of the stalk down, although the majority of banana plantations in Costa Rica hang the stalk with the cut end up. The advantage of stalk-down is that the milky latex from the plant, which stains the bananas, flows directly onto the ground, thus avoiding this staining problem. However, there is a higher risk of fruit damage from adjacent hands of bananas. During my field period at Calarcá, there was some pressure from Dole to change this practice, and as a result, a trial was done to calculate the comparative damage associated with each technique. As predicted by virtually everyone at Calarcá, the trial indicated that the least amount of damage occurred by maintaining the status quo. Nevertheless, the test was necessary in order to convince Israel, and to alleviate pressure from Israel and therefore Dole.

Via Israel, Dole's interest in Calarcá went well beyond fulfillment of the cutting order and production techniques, including even management style. This interest will be examined further in the next chapter, with respect to the dismissal of Calarcá's packing plant supervisor. I asked don Jaime, Calarcá's administrator,

whether Dole was only concerned with the quality of the bananas, or also with the operation of the plantation. His response (translated) was that:

> They are interested in high quality and also that things are done well in order to obtain this high quality. They are also interested ... that things go well with us, that we can sell all of our product, that we earn money, that we can attend to the needs of the company. ... It guarantees for them that they are going to receive good quality fruit, a plantation without problems, without labour disturbances, it guarantees for them the peace and tranquillity that they will be able to market good fruit.

In short, Israel, the Dole inspector, was a presence with significant power over the production processes at Calarcá. As such, don Jaime maintained good working and social relations with Israel, and had great interest in keeping Israel satisfied with Calarcá. Quality control was the mechanism through which Dole monitored Calarcá, its so-called 'independent' supplier.

2. The Organization and Implementation of Quality Control on the Banana Plantation

As discussed previously, the macro structure of the banana industry is manifested at the micro level as production emphasis on quality control. As a result, banana plantations are structured specifically to maximize productivity and quality control. This system of production is standard throughout the industry, and has its roots in the United Fruit Company plantations in Southern Costa Rica. These historical roots represent but one of the links between the organization of production and the power of the transnationals. This topic was discussed in chapter 3, which examined historical aspects of the Costa Rican banana industry.

The emphasis on quality control is reflected in the organizational structure of the plantation, and of banana production in a system of standardized and linked practices in quality control. This section will thus begin with an examination of the social organization of quality control, as seen at finca Calarcá during my field period. Then follows a description of some of the production practices that contribute to quality control, divided into field practices and the cutting and processing of bananas. I must reiterate that although this analysis is based on my observations at finca Calarcá, the high degree of standardization of production throughout the banana industry is such that the discussion below represents the vast majority of Costa Rican banana plantations, and especially independent plantations.

An expanded description of finca Calarcá, its production processes, and its workers can be found in the appendix.

a) The Social Organization of Quality Control at Calarcá

i) Definition of Positions

At Calarcá, there was a strict definition and separation of various levels of workers. The three main categories included top management, middle management, and the front-line workers. Separating these levels was central to the clear and standardized definition of tasks and responsibilities associated with quality control.

Top management consisted of the plantation owners, of don Héctor, the managing owner, of don Jaime, the plantation administrator, and Balto, the field manager. Of the top managers, don Jaime, the administrator, clearly had the most

power. He was, simply put, responsible for the plantation, and to a large degree the success of Calarcá was attributed to his expertise, skill, and business management. Don Héctor was largely involved in strategic long-term issues, in keeping don Jaime in check, and in financial matters. Balto, the field manager, was responsible for quality control in the field, and for the field supervisors. Although Balto had a fair degree of autonomy, he reported to don Jaime, the plantation administrator.

Middle management consisted of field and packing plant supervisors. There were three field supervisors, each of whom supervised a block of fields, as well as 35 to 45 field workers, whose work comprised all of the field maintenance, care of the banana plants and harvesting of the bananas. In the packing plant, Florencio supervised approximately forty packing plant workers.

The approximately 100 front-line workers were divided between the field and packing plant. Field workers were responsible for maintenance of the banana plants, and for cutting and transporting bananas to the packing plant. In the packing plant, workers removed the bananas from the stalks, cut them into bunches, and after several selection procedures, packed them into boxes and onto the trucks for transportation to the port.

The separation of these levels was manifested in terms of formalized communications, which only took place with one's direct supervisor or worker. In addition, this separation of levels was reflected by social spaces on the plantation. The plantation office was primarily the domain of the top management, although this was also where John Freddy worked, aggregating and analyzing data on the

computer. A covered eating area was primarily the domain of the front-line workers, especially those of the packing plant, and the 'soda', or cafeteria, was primarily the domain of the field workers. Middle management's intermediary position was reflected by the fact that although they frequented all of these social spaces, they generally did so only with a specific purpose, and they did not linger.

For example, many of the field workers, for example, especially those who live in the 'baches', or worker housing, ate their meals at the soda, but also frequently socialized, watched television, or played dominoes or cards. Most of the packing plant workers brought their lunches from home, and ate in the covered eating area adjacent to the packing plant. The field supervisors usually ate their lunch at the soda, but the top managers, including Balto, don Jaime, and don Héctor generally preferred to eat in Bataan. Their presence in the soda for coffee or an occasional meal, however, was not unusual, but like the field supervisors, they did not socialize or remain long.

ii) Data Generation and Analysis

There were several people at Calarcá whose jobs were based on the generation and analysis of data relating to various aspects of production and quality control. These were: 1) John Freddy, who ran the plantation office; 2) Ivan, the patio supervisor; 3) Roberto, the quality control manager, and to a lesser degree, 4) Roy, in charge of the stockroom. Almost all of the materials for production were kept in the stockroom, and therefore Roy was in charge of stock control, as well as keeping close track of the materials used by the field workers. This monitoring helped to

standardize and control field production techniques. The data generated by Ivan, Roberto and Roy were passed on to John Freddy, in the plantation office, who aggregated the data, and made calculations relating to productivity and quality control. These calculations then went to don Jaime, the plantation administrator, to Balto, the field manager, the field supervisors, and the packing plant supervisor, as well as to Dole, Calarcá's marketing company.

These data generators and analysts played an important role in the standardization of production techniques and of outputs, and as discussed further in the next section, were central to quality control and productivity. Although these individuals were not in hierarchically superior positions, their role relative to quality control afforded them significant status and authority on the plantation. In addition, because of the importance of standardization and quality control to banana production, this data generation and analysis directly affected virtually every worker.

iii) Standardization and Supervision

Standardization contributes greatly to quality control, and was achieved at Calarcá by several different strategies.

First, there was a high degree of both horizontal and vertical specialization in the field and the packing plant. That is, some jobs had an extremely narrow range of tasks required, and the workers had little responsibility or authority over the completion of the tasks. The high degree of horizontal and vertical specialization

contributed to standardizing work processes, and to a lesser degree of outputs. This was seen as an important component of quality control.

Packing plant workers tended to do one specific task exclusively, and in the field, workers tended to do two or three different tasks. In the field this was reinforced by the pay scheme, by which workers were paid a specific amount for a task per hectare. For example, workers were paid a certain amount for chemical application per hectare, and a different amount per hectare for tying rope to the banana plants. By contrast, in the packing plant all workers were paid the same regardless of task. Nevertheless, horizontal and vertical specialization remained the norm in the packing plant.

Standardization was also achieved through supervision of the front-line workers, whose work had the greatest impact on quality control. Packing plant workers were under direct supervision: above one of the 'pilas' (washing tanks) Florencio, the packing plant supervisor walked a catwalk, literally overseeing the work being performed. In addition, as discussed earlier, on many cutting days the packing plant was also supervised by Israel, the Dole quality control inspector.

In the field, however, direct supervision was impossible. There were three field supervisors, each directly responsible for 35 to 45 field workers who either worked individually, or in small teams, depending on the task. In addition, the field supervisor's area of responsibility included over 50 hectares of banana fields. Thus it was not uncommon for a field supervisor to be unable to locate his workers in the fields, or to directly verify the work of a given worker or team. In addition to

precluding direct supervision, these factors also limited informal communications as a supervisory strategy. As a result, the field supervisors attempted to control their workers via several different strategies to increase the quality of their work. Although some initial training was provided to field workers, standardization of work skills was not practical at the plantation, largely because the turnover of workers was high, but also because the pay was relatively low. As a result, the field supervisors' primary strategy was the standardization of work processes. This method was preferred to the standardization of outputs because allowing a field worker's work to remain poor until it resulted in decreased production levels or the quality of the bananas was an unacceptable cost for the plantation.

Field work is central to the productivity and quality control of the plantation, for which the field supervisors are directly responsible. Yet the practical problems of supervising and of achieving necessary standardization contribute to the difficulty of field supervisor positions, and results in a high turnover of this position. Don Héctor, the managing owner, claims that in the first four years Calarcá was in production, there had been 15 to 20 field supervisors.

b) Quality Control in Practice

Throughout the banana industry, production processes are highly standardized and have been highly refined: every production technique has been subjected to rigorous scientific examination. The level of scientific detail incorporated into day-to-day production techniques can be seen in the works of Sierra (1993) and Soto (1992), both of which are considered banana production

"bibles." Increasing productivity levels and the quality of the fruit largely determines the plantation's profitability, as well as the ability to obtain the highly desirable long-term buying contracts with transnational marketing companies. In a context of low profit for independent plantations and of market oversupply, these issues are of critical importance. Science-based production techniques are virtually universal throughout the industry with very minimal variation, largely because marketing companies require extremely high quality standards for export bananas, and therefore, by extension, the use of quality production techniques. Further, labour costs are higher in Costa Rica than in other Latin American countries, so Costa Rican bananas compete through quality, not quantity or cost. Thus the Costa Rican banana industry emphasizes quality control.

The following section briefly explains some of the practices that contribute to quality control on the plantation, including on-going production practices in the field, and procedures relating to the cutting and processing of bananas in the packing plant.

i) In the Field

One of the most important tasks in the field is the selection and elimination of the daughter plants. Banana plants reproduce by cloning, and thus several new daughter plants appear at the base of every mother plant. Only one of these is selected to grow to maturity, and the others are destroyed. This culling increases the quality of the fruit of the daughter plant and avoids overcrowding. Selecting the best daughter plant is based on the health of the plant, its location to the mother

plant and its fruit, and its location relative to adjacent plants. Selected daughter plants are often tied with rope keep them an adequate distance from the mother plant. The distance ensures proper growth of the daughter plant, as well as proper fruit growth of the mother plant.

Another important task is population control, which regulates the density and distribution of plants throughout the plantation. Like virtually every task associated with banana production, population control is an industry-wide standardized process. A 7.89 metre rope is revolved around a stake; the number of plants inside the circle is counted, and decisions are made about the placement of existing plants. Both the tasks noted above require a fair degree of experience and expertise; Balto, the field manager explained that they represent the "future of the plantation", and if done improperly, could ruin the plantation within a year. For these reasons, only the most experienced and trusted field workers select daughter plants, and only field supervisors and the field manager perform population control.

One of the primary means of standardizing field techniques is to colour code the plants by age. When fruit first appears, a coloured plastic ribbon is tied to the plant, corresponding to the calendar week. The ribbons, eight colours in all, are then used to standardize the various field tasks. For example, in a given week, new plants might be tied with red ribbons, plastic bags applied to plants with blue ribbons, and plants with brown ribbons might be harvested. The following week, the colours would be rotated. This method standardizes all the production techniques for each banana plant across the entire plantation. In the stockroom, Roy

tracks the flow of plastic bags and ribbons, thereby verifying the completion of tasks completed in each field block. Workers report to Roy the numbers of the fields completed with a task by writing the numbers on immature or deformed bananas, and by delivering the flowers, empty chemical sacks, or remaining ribbons, rope or plastic bags. This system of reporting indicates that the tasks were completed, and serves also to standardize the process.

Several weeks after fruit appears on the plant, the bananas are covered with an insecticide-impregnated blue plastic bag. In addition to their chemical attributes, the bags also regulate the temperature of the fruit, and decrease its exposure to direct sunlight. Before the bags are applied, incomplete bunches of bananas or 'false hands' are removed from the bottom of the stalk. In addition, at Calarcá, three complete or 'true hands' were removed to increase the grade of the remaining hands. However, if, after the removal of three true hands, less than six hands remained on the stalk, the entire plant was cut and destroyed, as the plant would likely be below grade and have few hands, thus wasting labour, chemicals, bags, and land. Before the bags can be applied, the flowers must be removed, and are brought to the stockroom by the field worker as proof of bagging.

Pesticides, herbicides and fertilizer are also applied to the banana plants. One exceptional aspect of Calarcá was that nematicides were not used, which is not to suggest that there were no nematodes, or that they did not cause damage. However, don Jaime was skeptical about the severity of nematode damage at Calarcá, which could only be confirmed by extensive and expensive soil sampling. In addition, don

Jaime believed that nematicides actually increase nematode activity. Nematicides are also very expensive. During my field period at Calarcá, Dole was contracted to complete a nematode survey. Although the results indicated the presence of nematodes throughout the plantation, in the end don Jaime and don Héctor decided to continue production without nematicides.

As discussed previously sigatoka disease control measures are extremely important to quality control, and the most effective means of controlling sigatoka is aerial spraying of several chemicals. The combination of chemicals is important for increasing the effectiveness of the treatment and for preventing resistance. Dole completes aerial spraying every two weeks.

Giant Cavendish bananas have been genetically engineered to maximize the size and number of bananas on each plant, to the degree that the weight of the fruit can make the plant vulnerable to wind damage. As the fruit grows larger and heavier, teams of four field workers secure the banana plants with rope, by attaching them to each other or to wooden stakes in the ground.

ii) <u>In the Cutting and Processing of Bananas</u>

Calarcá received cutting orders from Dole, their buyer and marketing company. Individual cutting days were designated to coordinate with shipping schedules: on those days, bananas were cut and the packing plant workers were called in to work. The cutting order specified the ship name, the destination of the shipment, and the time that the order must be received at the port. The cutting order also specified whether the boxes were to be packed directly into the truck, or

on palettes. Because of variable shipping times, the destination of the shipment, i.e., to Germany, the U.S., or Russia, for instance, determined the maturity, or ripeness, of the bananas to be cut. This was explicitly stated on the order: how many weeks old the bananas could be, as determined by the colour of the ribbon. The cutting order also specified the acceptable range of grades of the bananas, expressed in millimetres. Also on the cutting order was the types of chemicals to be applied to the fruit before being boxed, determined by the destination country. Finally, the cutting order also included packing instructions, which varied by destination.

The cutting team located stalks marked with the coloured ribbon indicating the proper maturity. At harvesting, bananas are not ripe, but are emerald green in colour. Before cutting the stalk, a field worker calibrated the bananas to ensure that the middle banana on the second hand of the stalk was of the grade specified on the order. If not, the stalk was left, to be cut the following week. A pole placed under the stalk supported it and foam pads were placed between the hands of bananas to prevent them from damaging each other. A large piece of foam was placed on one worker's shoulder where he caught the stalk after another worker cut it with a large machete. The stalk, weighing between 35 and 40 kg., was carried to the cable via, and hung on a hook with a loop of rope. When 15 to 20 stalks had been loaded onto the cable via, one of the workers pulled the 'train' of stalks to the packing plant. The division of the cutting tasks was standardized, and with few exceptions, the same worker always completed the same set of tasks.

The 'train' of stalks was pulled onto the patio, which could hold multiple trains due to a series of switches. Ivan, the patio supervisor, compiled data about the stalks, including the number of stalks, the number of hands per stalk, the grade, as well as the number of each of the different types of defects or maltreatment of the bananas. These include leaf damage, damage caused by another hand of bananas, various diseases, latex staining, chemical burns, knife cuts, bruising, and rarely, genetic defects.

Of the defects, bruising, chemical burns, knife cuts, and to some extent, damage from adjacent hands indicated maltreatment by field workers, and great care was necessary in order to increase fruit quality. Therefore, a performance rating of the cutting team was also calculated and expressed as a percentage. The percentages were displayed on a white board in the patio, and Balto, the field manager, liked them to be as high as possible. The field supervisors liked the percentages to be at 93%, or above. According to the field workers, they were careful with their work until they reach 92%, but did not work to achieve higher than that. The data from the patio was compiled and given to John Freddy in the plantation office for further processing.

During my field period, Calarcá instituted a new technique to decrease damage by field workers during the cutting process. They replaced the small pieces of foam used to prevent damage from adjacent hands with long (approx. 2 metre) foam strips that were wrapped around the stalk and tucked under each hand. The foam strips were colour-coded to indicate the cutting team. After instituting this

practice, all of the cutting teams' quality percentages rose well above 93%. This pleased management and Dole, and in addition, the cutting teams found the strips easier to use, thereby making the technique viable.

The hands of bananas were floated in water to wash the bananas and to prevent latex, which oozes from the cut, from staining the fruit. This procedure is critical, as latex staining only becomes visible after several hours, after the fruit is already boxed. Latex also prevents the proper adhesion of fungicides and thereby increases the risk of rot in the entire box of bananas. On the other side of the first 'pila', 7 or 8 workers, almost all women, were responsible for quality control and cutting the hands into bunches.

The women at the first pila rejected any banana with too many cosmetic defects, such as damage from latex in the field, from leaves, or from adjacent hands. They also rejected any banana that was too small, had ridges on the peel, or had an improper curvature (too much or too little). These rejected bananas were thrown onto a conveyer belt, which removed them from the packing plant and into a concrete pit for disposal. Approximately 20% of all bananas are rejected for these cosmetic reasons.

Market oversupply allows quality standards to remain extremely high, which results in a large proportion of bananas being deemed unsuitable for export (Hernández, 1997; personal communications). The vast majority of these bananas have only cosmetic defects, which do not affect the fruit itself. These waste bananas are disposed of in several different ways: often crews of local men take them away

by truck at no charge; they are sometimes picked over and taken to San José, the capital, to be sold to a discount supermarket, or at local markets. Often, however, the bananas are sold to Mundimar, a company that produces banana purée, or to Gerber, which produces baby food. At Calarcá, any bananas not taken away were delivered to adjacent cattle farmers and fed to the cows, who ate them peel and all.

The selected, newly cut bunches of bananas were placed in a second water tank, and floated across to a second set of four or five workers. These workers removed the floral residue from the bottom of each banana, which if not removed, will eventually rot the entire box of bananas.

The bananas were then placed into a third water tank, on the other side of which were three workers who placed them onto large trays. The trays, on rollers, passed through a spray of multi-chemical solution. The first chemical, alum, is an astringent to prevent latex staining, and is sprayed on bananas for all shipments. The other chemicals are fungicides to prevent rotting of cut surfaces. The fungicides used vary, depending on the destination of the shipment, whether to Germany, the U.S., or Russia, for example.

Before the boxes of bananas were loaded onto the trucks, Roberto, the Quality Control Manager, took samples. Samples of individual boxes were checked extensively for defects, for grade, for the packing, and the weight and number of bananas and bunches were verified. Rigorous statistics were recorded and passed on to John Freddy in the plantation office, and to Israel, the Dole Quality Control Inspector.

Calarcá, despite employing several unconventional production techniques, had extremely high levels of both productivity and of fruit quality. This achievement is especially noteworthy because as an independent plantation, Calarcá did not have access to ongoing evaluation by leading engineers and agronomists, as do most transnational plantations. In particular, this success speaks highly of plantation administrator don Jaime's expertise and leadership at Calarcá. It also indicates a degree of acceptance by Dole, Calarcá's marketing company, of variations in production. As will be seen in the next chapter, however, Dole's acceptance of deviations from the norms of banana production is limited.

3. Conclusion

The power of the transnationals is a dominant macro feature of the banana industry. At the micro level, this power is evident in numerous ways. Although there has been a dramatic increase in independent producers, the transnationals have maintained their power base. The transnationals articulate power in a number of ways. First, they are extremely active in virtually every aspect of the industry, including committees and industry associations. Second, the transnationals are also prominent producers and have direct and indirect control over independent producers as marketing companies. The transnationals' power is facilitated by the lack of definition among the roles of the industry associations, particularly CORBANA, as well as the role of the state, variously labeled as 'weak' or 'complicit'. In addition, the transnationals' role as marketing companies maintains their power, as seen is through their maneuverability in the market, through the measures for

sigatoka disease prevention, and especially through the transnational quality control inspectors. Market oversupply also plays a significant role, especially in terms of its contribution to the increased productive focus on quality control. Both of these long-term trends were exacerbated by the increased production associated with the 'Banana Blunder', and the increased power to the transnationals associated with the related dispute with the E.U..

Quality control is the collective expression of numerous macro features of the banana industry. As such, quality control is of utmost importance to the plantation, reflected in the social organization of production, as well as in the linked system of production practices. On the plantation, strong divisions among various levels of organization contribute to quality control. Virtually every aspect of production contributes to quality control. One of these practices is the application of various chemical fertilizers, insecticides, herbicides, fungicides and pesticides. In addition, physical production techniques manipulate the growth of the banana plants. Vertical and horizontal specialization, the standardization of processes and supervisory strategies are employed to achieve as high a degree of quality control as possible. Additionally, several selection and verification procedures further increase the quality of the bananas, to the point that approximately 20% of all bananas that reach the packing plant are rejected. Various individuals compile systematic measuring, verification, and quantitative calculations and these measures affect virtually every aspect of production and worker on the plantation.

Quality control is critical for the plantation because it is the primary means of increasing productivity and profitability. In addition, for independent plantations, high levels of quality represent an increased likelihood of obtaining a long-term supply contract with a transnational marketing company. In part, this situation exists because transnational marketing companies require such production techniques and management structures. Quality control thus represents an important degree of security to independent plantations operating on minimal profit margins and which, due to market oversupply, are anxious to sell their fruit.

## Chapter 8: Worker Conditions, Resistance and Change on the Plantation

Chapters 4 and 5 analyzed macro aspects of the Costa Rican banana industry, including the features that have shaped it into its current form: 1) transnational power; 2) market oversupply exacerbated by the 'Banana Blunder'; 3) capitalist value on competition and profit; 4) chemically-dependent bananas, and 5) limited demands for environmental sustainability. Chapter 7 continues to analyze the consequences of these macro features at the micro level by examining many of the conditions of plantation workers.

The analyses in this chapter rely primarily on examples seen at finca Calarcá during my field period. As previously stated, the high degree of standardization within the banana industry allows information from Calarcá to be generalized as representing the majority of Costa Rican banana plantations, independent plantations in particular. The standardization of experience has been verified through conversations with workers, management, and industry associations. As well as examining worker conditions, several examples of resistance and change on the plantation are described, which further reveal the complex relations on the plantation and within the banana industry, as well as connections between the plantation and macro features of the industry. An introduction to the physical and social organization of production at finca Calarcá can be found in the appendix.

1. Wages, Holidays and Severance Pay

a) Relatively High Wages

Costa Rican banana workers receive the highest wages of all banana workers in Latin America. Further, the banana industry pays the highest wage of all unskilled work in Costa Rica, largely due to the minimum wage set by the government. In 1996, minimum wage for banana workers was approximately U.S. $0.90 hourly, (180 Colones, at the 1996 exchange rate). Many banana companies, especially the transnationals, pay slightly more than minimum wage to their workers (Ministerio de Trabajo documentation; CORBANA documentation; personal communications).

A lot of publicity is given to the fact that Costa Rican banana workers are paid the highest wages in Central America. However, Jansen (1998) documents that many banana companies, especially those which began production in the early 1990s, avoid paying the minimum wage, in part, by subcontracting labour for various aspects of production. In addition, Foro Emaús, a Costa Rican activist organization that informs on problems in the banana industry, reports that in fact, the salaries of Costa Rican banana workers have been declining on a descending curve since the early 1990s. They argue that, "these 'high salaries' received by some banana workers are the fruit of over-exploitation with long working hours" (Foro Emaús website).

At Calarcá, new workers received the minimum wage during the first three months of employment, after which they received a raise. Packing plant workers,

who work whenever there is a cutting order -- usually three or four days per week -- were paid the same wage irrespective of the task performed, typically about U.S. $12.50 daily (2500 Colones), or U.S. $37.50 to $50 weekly. Their earnings, based on the number of trucks to be filled as specified by the cutting order, varied from week to week. Field workers received task-based wages, depending on the number of hectares worked. At Calarcá, pay for a six-day week of fieldwork was typically U.S. $60, varying by task. However, wage variability depended most on the workers themselves, based on the amount of work they wanted to complete in any given week.

At the supervisory level, the patio supervisor received a gross monthly salary of approximately U.S. $425 (85,000 Colones). The field manager received approximately U.S. $780 (156,000 Colones) gross monthly. These salaries enabled a middle- or upper middle-class status, respectively. In addition, many of the field supervisors, office staff and favoured employees received a monthly housing bonus of U.S. $100 (20,000 Colones). As was discussed previously, the Atlantic region of Costa Rica is economically underdeveloped and as a result, banana industry jobs, even at the lowest pay levels, are considered well-paid.

b) Holidays and Severance Pay

Although Costa Rica has relatively good legislation on employee benefits and holidays, it is often not implemented. Calarcá offered one good example of this situation during the Easter Holidays (Semana Santa). Most Costa Ricans have much of Easter week off, and the Thursday and Friday are legislated as paid holidays for

all workers. However, in clear violation of the labour code (Código de Trabajo, 1996), no holiday pay was granted to workers who had been at Calarcá less than one month, and other employees received holiday pay only if they worked on the Saturday following. Because there was a cutting order for Saturday, many people worked, and therefore were paid for the holidays. In addition, many field workers worked on Sunday to make up for lost work over the holidays. Workers are supposed to be paid a premium for working on Sundays, but at Calarcá this was not done. Many of the workers were disappointed at not having had much of a holiday. One field worker who lived in plantation housing usually went home to his wife and baby on the weekends, but was unable to go home because of the lack of holidays. As a result, his wife and two-year-old son came to Calarcá for the week, sharing his 2 by 3 metre room.

Nonetheless, Roberto, the quality control manager, contended that most workers were not very dissatisfied with management over the illegal holiday payment because, although they didn't get much of a vacation, their cheques were not too bad, since many worked on Saturday, and therefore were paid for the holidays.

Severance pay was not always paid properly when an employee terminated employment. Severance pay consists of 5%, deducted from workers' pay cheques, and matched by the employer. This 10%, half of which is the workers' own earnings, is paid to the worker upon leaving the company. Jansen (1998) reports that there have been significant numbers of complaints that upon dismissal, the

company fails to pay its portion of the benefit. In addition to the 10%, the company is supposed to pay an additional 8% severance pay, unless the employee is at fault. However, the Costa Rican labour code allows for the termination of a contract if any damage is incurred by bananas or banana plants, or for more than two days' absence from work. Dismissal is therefore almost always considered the fault of the worker, and through these means, the company rarely, if ever, pays the additional 8% severance pay.

2. Working Conditions

a) Marginal Plantation Lands and Deteriorating Social Conditions

As discussed in the section on 'the Banana Blunder', existing plantations could not attain production levels necessary for the projected demands of the E.U. As a result, massive tracts of land were transformed into new plantations, almost exclusively in Costa Rica's Atlantic zone, to facilitate export to anticipated European markets. Traditional regions for banana production near the Atlantic coast and in the Talamanca region were expanded and intensified.

Because most of the premier quality lands for banana plantings were already in production, plantations were cleared in more marginal and peripheral lands. Production was increased in the Matina and Río Frío regions, and extended north into the Sarapiquí region, known for its biological diversity and nature reserves. Río Frío and Sarapiquí are both at greater distances from the port at Moín, near Limón, from which the bananas are shipped. The canton of Matina, where finca Calarcá is located was previously considered marginal for banana production because of wet

soil and poor drainage. Increased banana production thus corresponded with the development of plantation lands of poorer quality and/or of greater distance to the port.

As discussed previously, independent, rather than transnational, plantations carried out a large proportion of this expansion. It is therefore the independents that tend to have poorer quality lands and greater transportation distances. Both these factors increase the cost of plantation development and of production, as can be seen in the following example from finca Calarcá.

Finca Calarcá is a 10-minute drive along a gravel road from the nearest town, Bataan. Because there are no phone lines to Bataan, the plantation's administrative office is there, and communication between the plantation office and the Bataan office is via CB radio. Indeed, it was only with the development of Calarcá that electric power lines were installed leading to the plantation, one of the costs of development borne by the plantation owners.

Calarcá was early described as "swampo y crique" (swamp and creek) because the soil is poorly drained clay of marginal quality, and drainage remains one of the primary factors affecting production. The poor drainage does offer one benefit in that chemicals and fertilizers remain longer in the soil. However, poor drainage also causes the roots of banana plants to rot, and increases the plants' susceptibility to sigatoka disease. As a result, a network of drainage canals designed to lower the water table, criss-crosses the plantation. All banana plantations in Costa Rica feature this type of drainage canal.

If the drainage canals do not lower the water table enough, the plants yellow, and produce under-developed bananas. When this happens at Calarcá, Balto, the field manager, or don Jaime, the administrator, then orders that another canal be dug. According to Balto, the larger banana companies, almost all of which are transnationals, employ engineers to survey and calculate the height of the water table, but on independent plantations, such as Calarcá, the water table is estimated through experience, by understanding the soil type, by keeping watch, and finally by trial and error.

The canals at Calarcá were dug on an ongoing basis, using several excavators small enough to create canals between the rows of banana plants. However, because the soil has high clay content, its weight posed mechanical difficulties for the small excavators, resulting in high maintenance costs and a large amount of downtime. As a result, don Jaime ordered a larger excavator than is normally used for banana production. Although this purchase represented a large capital outlay, he felt it necessary, to keep production levels and banana quality high. This type of expense represents some of the hidden costs of marginal plantation lands, which were frequently purchased during the rapid expansion in Costa Rica during in the late 1980s and early 1990s.

One consequence of the rapid expansion of banana production and the increased use of marginal lands was a general deterioration of social conditions on the plantations. Mata and Mata (1993:48) list some social consequences of expansion in the banana industry as: 1) disintegration of the family; 2) decrease or loss of

access to social, financial, and educational facilities; 3) stress associated with increased migration; 4) increase in temporary or permanent poverty of workers and their families; 5) increase in alcohol and drug use and addiction, and 6) increased illiteracy. Mata and Mata argue that these present conditions are reminiscent of the poor conditions in the banana industry at the turn of the century, as popularized by Carlos Luís Fallas' 1936 novel Mamita Yunai.

As discussed previously, poor working conditions was, in part, related to the implementation of solidarismo as the dominant system of labour relations within the banana industry. Solidarismo was considered one of the primary factors that facilitated the rapid expansion in banana production. Thus, the marginalization of social amenities was considered a reasonable, if not positive, sacrifice for the expansion of banana production. Further, even though plantation development costs were high , the expansion in production had to be mobilized quickly, in order to take advantage of the perceived opportunity that the opening of the E.U. market represented. This further contributed to the abandonment of social services or facilities.

In the following passage, Don Jaime, Calarcá's administrator, discusses the state of social conditions (switching mid-sentence from the impersonal "they" to "we") [translated]:

> At the root of the crisis in the past three years [1993-6], the new companies have put almost no investment in social aspects. They haven't constructed houses, they don't have good programmes with solidarista associations, they don't have loan programmes for workers, we don't have a housing

programme with the workers, we don't have an established or adequate policy for salaries, and so workers look elsewhere for a better opportunity.

The poor social conditions associated with the rapid expansion in production, as well as with worker migration are well documented by Jansen (1998) and by Foro Emaús, referred to earlier. After a 1992 outbreak of cholera on a banana plantation, Uriel Badilla, the Vice-Minister of Health, reported that the banana companies were expanding so quickly that proper facilities weren't being provided for workers. Following the medical evacuation of the plantation, a reporter described worker housing as "run-down barracks" (Jansen, 1998:229-30). Mata and Mata (1993:48) stated that the situation was particularly appalling because of the financial resources of the transnationals, as well as State complicity.

b) Sexist Division of Labour

There was a clearly gendered division of labour in the packing plant at Calarcá, typical of the Costa Rican banana industry. Other than Ana, the office manager, the only female workers at Calarcá were in the packing plant. However, not all packing plant jobs were accessible to women. Their jobs were limited to the three washing tanks, and applying stickers to bunches of bananas freshly sprayed with chemicals. Occasionally men would perform these jobs. Only men removed from the stalks, packed them into boxes, removed plastic bags, and cleaned the patio. Supervisory and management jobs were not accessible to women. Because all packing plant workers were paid on the same wage scale, the women received the same amount as the men. However, as mentioned previously, packing plant

workers only work on days when there is a cutting order, therefore the work schedule, and the pay was irregular. Because the majority of packing plant workers were women, they were disproportionately affected.

Even though the pay scale was the same for all jobs in the packing plant, women's jobs were undervalued by their male co-workers, as illustrated by the following incident at Calarcá. At a staff meeting, William, a packing plant worker who boxed bananas, suggested that if there were fewer workers, maybe they could be paid more, and therefore perhaps there should be fewer workers at the second pila (water tank). The women were furious, and Elena, a second pila worker, responded angrily to the manager that William had acted "as if removing the floral residue were a cushy job [como si el desflore fue trabajo de jamón]... These are all boring, hard jobs, and [that's why] everyone here [in the packing plant] is paid the same."

c) Exposure to Chemicals

As discussed in the previous chapter, one of the most important methods of controlling quality on the plantation is massive use of chemicals. This chemical use has serious consequences for both environmental and human health, especially that of the plantation workers. This is because humans do not readily develop resistance to these chemicals and therefore the effects can be severe, for example, cancers, sterility, and genetic malformations. This is reflected in epidemiological data regarding banana production in Costa Rica which demonstrate that people associated with banana production suffer from more than 10 percent higher

instances of sterility and damage to kidneys, liver, brain, nervous systems, lungs, heart, eyes, blood, skin, metabolism, and the overall immune system, as compared to the general population (Hilijy, Castillo, Thrupp and Wesseling, 1992, cited in Hernández, 1997:69).

However, as previously discussed in the case of the effects of DBCP on banana workers, the consequences of routine chemical use are not considered of primary importance. Marvin Amador, of the Costa Rican Ecological Association, Friends of the Earth, and of the Foro Emaús, explains that, "the banana companies select the pesticides according to the fruit residue tolerance of the buying countries, and not according to the level of toxicity to the environment or to human health (Foro Emaús website). As a result, banana workers are regularly exposed to chemicals that are dangerous to their health. The following section examines some of the chemicals routinely used in banana production, and many of the associated health effects.

Several weeks after the fruit appears on the plant, stalks of bananas are covered with blue plastic bags impregnated with insecticide (organofosforado clorpirifós, 1%). The chemical-impregnated plastic bags are later removed from the stalks on the patio, and bundled by hand for recycling. No gloves, no sort of worker protection at all, is used in the application or removal of these bags. According to the World Health Organization (WHO) (cited in MIRENEM, 1992), clorpirifós is highly toxic topically (through the skin) and orally, with long-term

effects that include nervous system disorders. It is also extremely toxic to birds, fish and insects (Hilijy, Castillo, Thrupp & Wesseling, 1987).

Also used for quality control are pesticides, herbicides and fertilizer applied to the banana plants. The chemicals used at Calarcá, and commonly within the industry, include fertilizers (ammonium nitrate, urea, potassium chloride) and an insecticide (glifosate). According to the World Health Organization (WHO) (cited in MIRENEM, 1992), glifosate is moderately toxic chemical, a skin and eye irritant that may be carcinogenic. It persists in soil, and is toxic to fish and other aquatic life. The herbicide Paraquat is also commonly used: it has resulted in numerous worker poisonings, is on the United Nations' Food and Agriculture Organization's (FAO) 'principle of informed consent' list, and is one of the 'Dirty Dozen' of the Pesticide Action Network (EIU, 1998, 1:22; Foro Emaús documentation; Hilijy, Castillo, Thrupp & Wesseling, 1987). As also discussed in a previous chapter, one of the most toxic types of chemicals used in banana production is nematicides, including the following currently in use: terbufós, etoprofós, fanamifós, carbofurán, and oxamil. The World Health Organization (WHO) lists all of these as either highly or extremely toxic, through respiration, ingestion and skin contact. These chemicals have been linked with cancer and are also toxic to birds and fish (MIRENEM, 1992; Sierra, 1993).

According to Wesseling et al. (1991 cited in Mata and Mata, 1993:47), there were ten times the numbers of chemical poisoning cases in the Atlantic zone of Costa Rica, than in the remainder of the country. Of all cases of chemical poisoning,

76% originated on banana plantations; of these, 40% were attributed to Aldicarb and Paraquat alone. The EPA banned Aldicarb in 1990, not, however, because of its effects on banana workers, but because excess levels were detected in bananas, thereby posing a potential risk to consumers (MIRENEM, 1992; McWhirter & Gallagher, 1998: May 3). Bananafair, and the UK-based World Development Movement explain that cheaper chemicals, common some 20 years ago, are used intensively instead of their modern, less toxic, but more costly alternatives (cited in EIU, 1998, 1:22).

Calarcá was somewhat unique in that nematicides were not used. However, during my field period, don Jaime, Calarcá's administrator decided to contract Dole to complete a nematode survey. Several of the workers who were aware of the potential effects of nematicides, were disturbed in case they should they be implemented. Roberto, the quality control manager said of nematicides (translated): "there's bad and worse. They kill everything, the soil, the water, and of course people." Roy, in the stockroom was adamant (translated): "if they're going to start bringing nematicides in here, you make sure you tell me. I don't want anything to do with that stuff, it's bad! You promise me you'll tell me"? In the end, even though moderate levels of nematodes were found throughout the plantation, don Jaime and don Héctor continued production without the use of nematicides.

Chemicals are generally applied without any worker protection, sometimes because the necessary gear is not provided to the workers. In addition, the hot and humid climate in which bananas are grown makes this protection gear, which

includes heavy rubber suits and face masks, extremely uncomfortable, thereby decreasing the likelihood of use (EIU, 1998, 1:22).

Chemical risks are exacerbated by the pay scheme for field workers, who, paid by the hectare, must work quickly. They often eat a snack or lunch in the field, a serious health risk because of high concentrations of chemicals in the field and the absence of any washing facilities. As discussed in chapter 6, the Eco-OK/Better Banana certification programme has resulted in significant improvements to worker protection. However, it should be recalled that: 1) only Chiquita-owned plantations participate in the programme; 2) it does not include its independent suppliers; 3) the Eco-OK/Better Banana certification criteria do not affect the types or amounts of chemicals used in banana production.

Workers are also exposed to the chemicals used for sigatoka disease control, for which the most effective means is aerial spraying. Dole sprays for sigatoka with a chemical mix that includes Calixin (Tridemorph), which, according to the World Health Organization (WHO), is highly toxic, is a skin irritant, is harmful to embryos and fetuses, and is highly toxic to fish (MIRENEM, 1992). All chemicals in common use against sigatoka are listed by the WHO as at least somewhat toxic to humans, through inhalation, ingestion or skin contact. They are also very toxic to fish (MIRENEM, 1992; Hilijy, Castillo, Thrupp & Wesseling, 1987).

Aerial spraying is conducted every two weeks, and as previously noted, several fungicides are combined into 'cocktails', to increase the effectiveness of the treatment and prevent resistance. However, the exact ingredients and proportions

of chemicals used in the cocktails are considered a trade secret (Sierra, 1993; Hernández, 1997). Workers are neither notified nor removed from the area during the spraying: the white chemical cocktail 'snows' down in white flakes, covering every plant, animal, person, and water source within and adjacent to the target area.

Although there are no chemicals in the water tanks (pilas) in the packing plant, the women's hands are constantly wet, and they wear no protective gear other than rubber aprons. After passing through the water tanks, the banana bunches are placed onto large trays, and then pass through a spray of multi-chemical solution. The first chemical, alum, an astringent that prevents latex staining, is sprayed on bananas for all shipments. The other chemicals are fungicides to prevent rotting of the cut surfaces. At Calarcá, the fungicides used varied according to the shipment destination, Germany, the U.S., or Russia. U.S. shipments are sprayed with thiabendazol (brand name Mertec), the most popular fungicide used throughout the industry. Shipments to Germany are sprayed with Butylcarbamoyle (brand names Benzimadazol, Benlate or Imazalil) (Soto, 1992; Sierra, 1993), and shipments to Russia are sprayed with both. According to the World Health Organization (WHO) (cited in MIRENEM, 1992), thiabendazol is moderately toxic, and can lead to skin lesions and nervous system disorders. These chemicals are also associated with dermatitis, asthma and other allergies, which develop due to chemical exposure (Mata & Mata, 1993; Hilijy, Castillo, Thrupp & Wesseling, 1987).

There are three spraying stations in the packing plant. Immediately after passing through the chemical spray, the banana bunches are labeled by three

workers, who place a brand-name sticker on each chemical-drenched bunch. These workers are constantly exposed to the chemical spray, both through inhalation and skin contact. In contrast, one of Chiquita's Eco-OK/Better Banana certified plantations used a large receptacle, which shielded workers somewhat from the spray, and workers wore rubber gloves for the application of stickers. In addition, at EARTH College, an improved receptacle has been developed and is used to contain the chemical over-spray. There, bananas are also allowed to dry before the stickers are applied (MIRENEM, 1992).

Mileidy (the Spanish phonetic spelling of 'milady') was one of the women who put stickers on bananas at Calarcá. She had just turned 16, had quit school because she preferred to earn money, and had been at Calarcá for four months. When I asked Mileidy what was in the spray, she answered with teenage superiority, "liquido" [liquid]. When I further inquired whether it was chemical, or water, or what, her response again was "liquido."

In order achieve extremely high levels of productivity and quality, massive amounts of chemicals are used on plantations on a daily basis. Most of these have significant, well-documented negative consequences for the health of banana workers, exacerbated by minimal use of protective gear, such as gloves, rubber suits or masks. However, worker ignorance is also a factor: many workers, and even supervisors, are unaware of the dangerous effects of the chemicals with which they have daily contact. This unawareness represents a significant benefit for management for several reasons. First, there is significant reduction, or even

elimination of the cost of providing and maintaining protection equipment. Second, workers' lack of knowledge the risks and consequences of chemical exposure contribute to a non-confrontational labour force. Ironically, failure to provide protective equipment reinforces workers' ignorance as it allows a mistaken perception of the safety of the chemicals in use. The provision of proper protection would tacitly admit the risks involved.

The Costa Rican labour code requires every company of more than ten employees to have an occupational health committee. Within the banana industry, however, these committees are virtually nonexistent, especially among smaller and independent plantations. Thus is workers' ignorance reinforced and thus is eliminated an important mechanism for worker recourse (Código de Trabajo:162). In addition, although solidarista associations have the potential to address such issues, the inactivity of the associations, and the presence of management on the committees undermines their utility in this respect.

d) Worker Turnover

Worker turnover presents an example of company practices and worker responses illustrating the complex relationships on plantations. Front line workers in both field and packing plant have a high level of turnover. At Calarcá, for example, in a two-week period, 19 workers (roughly 15% of the workforce) were classified as inactive. Of these, nine were classified as quitting voluntarily (retiro voluntario), two abandoned their position (abandono de trabajo), three were placed on probation (período de prueba), three were fired for absenteeism, and two were

fired due to a managerial decision (resolución patronal). According to Ana, the office manager, these figures and distribution were typical for Calarcá. Nevertheless, the high worker turnover was not exclusive to the front line workers, as there was also a high degree of turnover among field supervisors.

It was interesting to note the wide variety of explanations for high levels of worker turnover. In the following section I discuss several of these explanations, as well as several key issues relating to worker conditions in the banana industry.

Several informants, in different contexts, and in varying terms, explained high worker turnover existed because banana workers were "nomadic by nature," that workers moved from job to job within the banana industry because it was "in their blood." The migration of banana workers is a significant issue for the development of the Atlantic region of Costa Rica, and will be discussed in a later section. Interestingly, similar attitudes on the part of banana workers could also be seen in the 1920s and 1930s. Kepner (1936:163-4) relates the following passage:

> Gregory Mason, writing in World's Work, of July, 1927, declared: "The fruit company has had the inescapable handicap of dealing with laborers who are restless and nomadic by nature, addicted to a wandering life. At one plantation, for example, there was a 100% labor turnover within approximately eight weeks,"
>
> And further comments that:
>
> it is true that some of the laborers on fruit company plantations were habitual drifters before they came in contact with that industry. Many of them, however, previously stable members of upland communities, became migratory after entering the employ of banana producers. With the shifting of banana cultivations from one place to another they have been forced to move about. With the breaking of home ties and the failure of the new communities to establish a permanent hold upon them, many develop the wanderlust.

Don Héctor, the managing owner of Calarcá, had a different explanation for why workers leave at such a high rate (translated):

> What is happening is that, at our plantation the work is very demanding, and Jaime, the administrator, is someone who demands that things be done well. He is very fair, with pay, and he recognizes work well-done, and the like, but also, when someone makes mistakes he tells them, and makes them pay for it. So, Jaime is very demanding, and many times the workers don't put up with this pressure, this level of performance, preferring to go to other plantations where they don't have to do better, and aren't required to do much, where no one bothers them. ... So, of course, if you don't bother the workers, you don't require them to work, it stays calm. On the other hand, in our case, what happens is that at the worker level, they go, many of them go, because the quality requirements for the plantation are very important.

Don Héctor implies that the problem of high worker turnover is limited to Calarcá, and is due to high quality and work standards. However, high worker turnover is an industry-wide characteristic. Nevertheless, it is interesting to note that quality control, both at the plantation and industry levels, arises as a primary explanatory factor.

While don Héctor states that don Jaime's high standards contribute to high worker turnover, don Jaime himself approaches this issue from a different perspective (translated):

> All banana plantations have had this problem, the ongoing turnover of workers. Because people look for, and you know that this is a free, democratic country, ... where people look for the best work opportunity, to earn a bit more, or where there are better work conditions. ... What would these better conditions be? A school for their children, a soccer field or basketball court, training, solidarista programmes, opportunities for advancement, an opportunity to live within the company, with a roof. ... There are many new companies, and we haven't been able to, or we haven't done things that will

> improve the lives of workers, that would improve worker stability. ... [As a result] We don't have adequate people to complete production tasks, there is no worker stability because of a lack of motivation, and that obliges us to work every day with inexperienced workers and to train new workers, who then leave for another plantation, looking for work as experienced workers.

Roberto, the quality control manager and a long-time Communist banana union leader, supports Don Jaime's position, stating that workers tend to express work-related discontent of any kind by "complaining with their feet." Following this line of reasoning, workers being "nomadic by nature," is more indicative of the working conditions in the banana industry, than of the psychological tendencies of its workers.

Several reasons for the high worker turnover are structured into the Costa Rican labour code. One of these was brought to my attention my worker survey at Calarcá, when several respondents gave their reason for leaving their last job in the banana industry as having "my period was completed" (cumplió el periodo). This phrase refers to the common practice of dismissing workers just prior to completion of three months' employment with a company. This practice benefits the company because there are higher requirements for employee benefits for workers who have completed three months. Dismissing employees prior to this point thus cuts labour costs.

The 'three-month period' is not the only contributor to high worker turnover that is grounded in the labour code. Article 81, clause d) provides as just cause for termination, any offense, failure or mistake which results in material damage to raw materials central to the workplace (Código de Trabajo, 1996). This clause can be

interpreted to mean that any damage to bananas or banana plants can be construed as just cause for dismissal. These circumstances occur as an integral part of work on the plantation on a daily basis, and therefore virtually any worker could conceivably be dismissed given managerial disposition.

Don Jaime criticized high worker turnover because it presents a disincentive for providing worker training and therefore the quality of the fruit is lower. However, high worker turnover offers the plantations several advantages. First, the high worker turnover allows banana plantations to cut costs by facilitating a workforce that is very adaptable to industry conditions. Secondly, it results in the repression of any labour organization on the plantation, whether union activity or active solidarista organizations. According to Jansen (1998), high worker turnover is a common means to cut costs and repress labour activity, and can be exploitative because workers are dismissed at the discretion of management for their benefit.

High worker turnover may also indicate the poor working conditions within the banana industry. The stereotype of 'the nomadic banana worker' obscures the underlying fact that social and working conditions within the industry are generally poor, and workers have little recourse but to "complain with their feet."

3. Ethnicity at Work?

The most significant treatment of worker conditions in the Costa Rican banana industry is Philippe Bourgois' 1989 book, *Ethnicity at Work: Divided Labor on a Central American Banana Plantation*, and its 1994 Spanish translation, *Banano, Etnia y Lucha Social en Centro América*. Bourgois' analysis examines ethnic division of labour

as exploitation, on a plantation that spans the Costa Rican-Panamanian border (the Bocas del Toro Division of the Chiriquí Land Company). Basing his arguments on his fieldwork experience, which included extensive personal communications and unprecedented access to company records, Bourgois argues that banana production is structured around a systematic and deliberate exploitation of various ethnic groups. He documents the exploitation of Blacks, Latinos, and of the indigenous groups, the Bribri, the Kuna, and the Guaymí. Bourgois also examines interaction between ethnic and class exploitation as seen through the heated union and labour issues which were inescapably prominent during his field period (1982-3).

Having read Bourgois' book before commencing my own field period, I fully expected to encounter similar findings at Calarcá, which is less than 100 kilometres from Bocas del Toro, where Bourgois completed fieldwork. However, my expectations were unfulfilled. First, I was unable to identify anyone from any indigenous group identified by Bourgois, and I could only identify two Black workers. Although my worker survey did not include questions identifying ethnicity, it included birthplace. Based on my survey data, 23% of the workers at Calarcá were born in Nicaragua; not one was born in Panama. These findings are in stark contrast to those of Bourgois at Bocas del Toro[3].

Several key factors are necessary to contextualize Bourgois' focus on ethnicity in the banana industry, and for the differences between our findings. Most

[3] Ethnic identification was not straightforward in Costa Rica. It was not possible, for example, to identify by physical characteristics, such as skin colour alone, whether a worker was Black. I therefore relied on the

important is the uniqueness of both Bocas del Toro and the time period in which Bourgois completed his analyses. First, The Bocas del Toro division of the Chiriquí Land Co. is owned by Chiquita, and is the direct descendant of the United Fruit Company's (UFCO) original holdings. As such, it is one of the only plantations in Costa Rica still using rail for transportation on and around the plantation. It should be recalled that banana production in Costa Rica and the UFCO were based on producing bananas adjacent to Costa Rican railroads. Bocas del Toro has maintained much of the infrastructure and organization of plantations that were prototypes of the UFCO and banana production itself.

At over 500 hectares, Bocas del Toro is one of the largest banana plantations in Costa Rica (CORBANA, 1996). It is very isolated from any towns, so that most workers live in plantation housing and rely on the plantation for their day-to-day needs. So intense is this company dependency, that Bourgois (1994:55) compares it to Erving Goffman's concept of a total institution. The lack of any significant small town development in this area directly relates to the dominance of this area by the UFCO, and later Chiquita, for the last century. They have actively deterred local development of the area. The history of Bocas del Toro thus contributes significantly to its unique character. This is reflected in Bourgois' analyses by the significant reliance on historical data as having direct relation to the ethnic structure of production during the early 1980s.

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judgments of those most directly involved with an individual, on the assumption that if they could not discern ethnic identification then no systematic ethnic structure could be in place.

In addition, Bocas del Toro spans the Costa Rican-Panamanian border, with a distinctive labour force drawn from local areas on both sides of the border. The range of ethnic groups in close proximity is perhaps richest in this area; in fact, no other region in either Costa Rica or Panama has such a high level of co-existence of Panamanian, Costa Rican, and Nicaraguan Latinos, as well as of Kuna, Guaymí, and Bribri indigenous groups. The traditional lands of the Kuna, for example, are limited to the Caribbean islands and to a lesser extent, the adjacent Panama mainland. Similarly, the Guaymí and Bribri traditionally lived in the coastal areas of southernmost Costa Rica and across the border in Panama. Further, although there was an early influx of Panamanians to the banana plantations in Costa Rica after the completion of the Panama Canal, this pattern for the most part has not continued. The exception to this is banana plantations in close proximity to the Panamanian-Costa Rican border, such as Bocas del Toro (World Conservation Union-The Nature Conservancy, 1995; Tropical Science Center, 1982).

Another important aspect of Bourgois' field period that contributes to his findings is the time in which he completed it, the early 1980s. During this time, labour issues and union disputes were at their most intense, and as Bourgois clearly demonstrates, the discord intensified divisions among various ethnic groups. As a result, it is understandable that Bourgois' findings in Bocas del Toro during the 1980s focus on ethnicity and labour strife.

I was extremely fortunate in having an informant in common with Bourgois. Roberto, the quality control manager at Calarcá was in his mid-forties, and had

spent his life in the banana industry. He was also an important Communist banana Union leader, and through training with the Communist Party, had visited Romania and Cuba, and completed extensive reading and study of the political economy of development and the banana industry (see Appendix: Selected Calarcá Worker Profiles).

Roberto takes credit for Bourgois' initial introduction to issues of unions and ethnicity. In his preface (1994), Bourgois explains that he initially intended to examine the non-economic means of worker coercion by the transnationals. Roberto said that Bourgois stayed for several days at his house not long after his arrival in the banana zone, and it was at Roberto's insistence that Bourgois went to Bocas del Toro, armed with several contacts Roberto had provided. Bourgois explains that from his visits to Bocas del Toro, he was forced to acknowledge the explicit role of ethnicity in day-to-day life and in banana production. Roberto also did some administrative work for Bourgois, and credits him with removing his name from the company blacklist, enabling him to gain employment in a political context that was hostile to Communist Union leaders.

I gave a copy of the Spanish edition of Bourgois' book to Roberto, who said that he found reading Bourgois' book a very emotional experience, that it was like seeing his life in print, and that it had been exactly the way it was told in the book. Interestingly, Roberto's eldest daughter, Xinia had also read the book, and was present during this discussion. The book angered her: she said that it implied that "it's as if every time I look at a Black or a White... it wasn't like that" (translated).

Roberto responded that she hadn't been old enough when they were in Bocas del Toro to have seen these things (born in 1974, Xinia would have been under 10 years old during this period). Roberto explained that Bourgois was talking about a very specific place and time, not about the entire banana industry. He maintains that this time period in Bocas del Toro region was quite unique (translated):

> At this time, the labour problems were at a head, and there were very heated party votes. It was very volatile. It was also at the time of the labour crisis in Golfito [on the Pacific coast], which intensified labour relations inside the UFCO [Chiquita]. Things were very different then with the whole union, labour relations context. Things are not like that now, in the context of solidarismo, and the ethnicity issues are fairly unique to the Sixaola [Bocas del Toro] region.

Bourgois (1994:285-6, translated) concludes that:

> at a less theoretical level (and more phenomenological-political), the best 'proof' of the crucial role of ethnicity in structuring, not only the work processes, but also the social relations, is in general, the persistence, the growth, and the central influence of racism in daily life.

This type of day-to-day racism was definitely a prominent feature at Calarcá. For example, when I asked Balto, the field manager whether there were any indigenous workers at Calarcá, he responded (translated) that "no, they live down in Talamanca (in Southern Costa Rica, near Bocas del Toro), and besides Indians don't like to work hard, and so they won't work in bananas. It's like the Costa Rican Blacks. They will only take a job where they can finish at two or three in the afternoon. They don't like to work in bananas either." I then asked him whether there were many Blacks at Calarcá, and he said no. Roberto, the quality control

manager confirmed that there were no indigenous workers, and identified only two Black workers.

Eduardo, one of the field workers, was more colourful in his description of the indigenous people and of different ethnic groups in Costa Rica and at Calarcá. (translated): "Here they're called 'cholos' [derogatory term for indigenous people], but on the Pacific they're called 'indios' [Indians]." Asked whether there were many at Calarcá, he responded that "No, they're mostly in Sixaola [near the Panamanian border], and there's almost none around here. Most of the blacks live in Limón, and not many work here." When I asked about Nicaraguans, he responded that "there's lots of Nicos [derogatory term for Nicaraguans] here, they're all over the place, lots of problems. Many of them are here illegally, they just come over the border, it's a bad situation there and so they come, but they bring problems, like theft, violence, drinking." I asked if it was easy for them to get a work permit [cédula], once they're here, and he responded, "No, it's hard to get a cédula . . . you can't work without a cédula, they always ask for them." "So all the Nicos that work at Calarcá are all legal, then?" I asked. "Yes, I suppose. Warner's a Nico" he responded.

Bourgois documents the Panamanians at Bocas del Toro being perceived as "the worst workers on the plantation." By contrast, at Calarcá, there were no Panamanians, and in fact, as the above example demonstrates, most difficulties, ranging from production problems to social problems, were attributed to the 'Nicos'. There was also a tendency for workers to overestimate the presence and the 'problems' associated with the 'Nicos': Miguel, a field supervisor, estimated that

approximately 80% of the workers at Calarcá were Nicaraguans. In fact, they constituted only 23%[4].

The intolerance toward Nicaraguans in Costa Rica, exemplified above, stems from the fact that during the 1990s there was a dramatic increase in legal and illegal immigration of Nicaraguans to Costa Rica, primarily due to deteriorating social and political-economic conditions in Nicaragua. In 1999, the Costa Rican immigration authorities (Dirrección General de Migración y Extranjería, DGME) estimated that there were 200,000 legal and 300,000 illegal Nicaraguan immigrants in Costa Rica, which represents approximately 15% of the national population. Nicaraguans accounted for an estimated 96% of illegal Central American immigrants in Costa Rica (EIU, 1999, 1:12; 2:12; 3:12-3).

Thus, at Calarcá, although there was ample evidence of racism, it by no means was indicative of a structured system of exploitation based on ethnicity, in contrast to Bourgois' findings. This difference in findings is due to the specificity of Bocas del Toro, both historically and during the 1980s, not only with respect to ethnicity, but also due to the intense union and labour disputes during the 1980s. Calarcá, on the other hand, is seen as fairly typical of Costa Rican banana plantations, particularly independent plantations (personal communications). Nevertheless, Bourgois' work is significant because it documents structured marginalization and exploitation that was central to the prototypical model of

[4] In Costa Rica, it is relatively common to refer to Costa Ricans from the North West region of Guanacaste as 'Nicos' because of the strong ties between this region and Nicaragua. However, in this instance, Miguel clarified that he was referring solely to Nicaraguans, and not Guanacastecos.

banana production. Although Bocas del Toro is unique in terms of ethnicity, it nevertheless represents the basic model of Costa Rican banana plantations.

4. Change on the Plantation

Very few avenues exist to address or change working conditions on banana plantations, largely due to a lack of unions, and solidarismo as the only form of labour relations within the banana industry. The switch from unionism to solidarismo, discussed at length in chapter 4, revealed solidarismo as an extremely controversial and questionable method of labour relations. This is, in part, due to its lack of activity within the banana industry, but also because of its tendency to favour management over workers.

At Calarcá, there was no active solidarista association, but the entrances of most plantations have a sign proclaiming participation, and Calarcá was no exception. The following text was painted conspicuously on the side of the packing plant: "The philosophy and the ideals of solidarismo are the pillars of development and progress of the company and its workers" (translated from Spanish: La filosofía y los ideales del solidarismo son los pilares del desarrollo y progreso de la empresa y sus trabajadores). Passing the packing plant one day with Eduardo, one of the field workers, I asked what he thought of the sign. Eduardo laughed, and said: "there's none of that (gesturing to 'development'). There's never been any of that (gesturing to 'progress'). There's just this (gesturing to 'the company'), and this (gesturing to 'its workers')".

Solidarismo provided no recourse for workers at Calarcá. Don Héctor attributes the failure of the solidarista associations to a lack of responsible leadership (translated):

> We've tried, several times, with the [solidarista] association and always we've encountered the problem of irresponsibility of those who manage the association, to the point where it couldn't be managed. Because it's an association of workers, and so they always name several people who are in charge of managing funds, resources, and run into the difficulty with this problem where there has been very bad resource management and when many times workers go to reclaim their savings, and the money has been spent by the leadership, doing bad business, or appropriating the money. And so it has been necessary to cancel the accounts. In the case of La Rita [a neighbouring plantation], for example, there was a group of leaders who lost a large amount of money and they won't say how, not that they're stealing it, but they make bad deals or lend it to other people who take off without paying. [At Calarcá] We haven't had much success with the association, because we haven't found honest workers who were willing to manage the association. But, it's necessary and it exists and they [the workers] have [solidarismo] savings, but it hasn't functioned the way it should.

On the other hand, don Jaime explains the failure of the solidarista association at Calarcá as due to the newness of solidarismo and the high worker turnover (translated):

> The solidarista association doesn't do much because it is relatively new and the leadership hasn't yet learned how to manage the money, investments, and transactions. Some day we might have the opportunity to learn, but we have decided to work only with the savings and contributions. ... The associations are generally representatives of the workers but when the workers aren't stable neither is the leadership [of the association]. So there hasn't been adequate work with the association, generally because the leaders leave, just as the workers do. It's a bit complicated, managing the association. ... To be in the association you have to have worked three months, but the majority of times, at three months the worker leaves.

In any case, at Calarcá the solidarista association was a non-entity and without a union, there was no recourse for workers other than "complaining to the boss." Usually, this referred to don Jaime, and although his underlying values may have been supportive of worker rights, the workers did not perceive him as either receptive or sympathetic to complaints. Their perception was no surprise, for in private or among management, don Jaime was very sociable and humorous, but in the presence of the workers presented a serious façade and brusque demeanor. Further, it should be recalled that responsibility for illegal or questionable holiday, severance, and overtime pay was don Jaime's, a matter that greatly affected workers' perception of him as unsympathetic to their concerns.

a) Advocacy on Behalf of Workers

Despite the state of working conditions and the lack of formal recourse, there was some advocacy on behalf of workers, and some change and resistance within Calarcá.

i) Field Supervisors

Field supervisors regularly and consistently advocated for their workers with Balto, the field manager, as can be seen in the following example of a closed meeting of Miguel, Florencio, and Francisco, the field supervisors, with Balto, the field manager. As was often the case, the conflict was about quality control, however, the sub-text of the discussion was the illegal payment of the Easter (Semana Santa) holidays.

The discussion dealt with the on-going issue of poor field practices by workers and appropriate supervisory and motivation strategies. Balto argued extensively on the important role of field practices for quality control, and also that the supervisors' talk of "workers' rights" and "benefit of the doubt" were just excuses for field workers' poor performance in the fields, and for their inadequate supervision. At one point Balto said, "we have to demand quality work from the workers as a basic standard, and if they don't like it, they should leave" (que se vaya). Miguel, backed by the other supervisors, responded forcefully that the workers had basic rights with respect to pay, work conditions and dismissal, and that these rights had to be respected.

The supervisors' position was that Balto saw only the worst in workers, and did not recognize that motivating workers was an essential aspect of increasing quality. This motivation required that the workers' rights be respected and that workers often be given the benefit of the doubt. Although they didn't state it directly, the supervisors felt strongly that management's failure to properly pay for Semana Santa clearly violated workers' rights, which undermined the supervisors' credibility with the workers, and made it more difficult to demand higher levels of performance in the fields.

Another issue raised was how to implement the task of replanting. Balto wanted the workers who selected and eliminated the daughter plants to mark the position for new plants, as part of their regular job. The supervisors disagreed strongly, arguing that because the workers were paid per hectare, this extra task

would make their job much harder. They argued that either the per-hectare wage for this job be raised, or that the task be on a separate contract with its own pay scale. They reasoned that every job was paid separately per hectare, and that it was the workers' right to be paid fairly for a separate job. Not surprisingly, Balto opposed this position because it increased costs. In the end, the supervisors' position was respected, and two additional workers were paid for the task. In this way, the field supervisors effectively advocated for the field workers to upper management. Despite this resolution, however, the meeting ended with everyone angry because the underlying conflict between quality control and workers' rights had not been resolved.

ii) Don Jaime

Don Jaime had strong ideals about the betterment of workers in the banana industry. He wanted to see more emphasis on occupational health, by having doctors give presentations on the risks of herbicides, and of the work in the fields, and how to prevent injury. He also wanted to implement ways of motivating workers, not to be better workers, but to be better people, so that they lived better, educated themselves, and invested in their children. Don Jaime believed this needed to be done from within a banana plantation, not because the company would profit from it directly, but because it would benefit the workers.

In 1995, don Jaime gave three education bursaries to workers so that they could study while working a limited number of hours in the fields. He stated that the purpose of this was not instrumental on the part of management to have better

field workers, but simply to provide something positive for the workers' lives. Don Jaime was also involved in promoting both Miguel and Francisco from field workers to field supervisors. This type of advancement is not common practice within the Costa Rican banana industry, as supervisors are usually hired externally. Perhaps the fact that Miguel and Francisco both had previously been field workers contributed to their advocacy for their former work mates to upper management.

iii) Roberto

The most significant changes in terms of improved working conditions at Calarcá came, not surprisingly, from Roberto, the long-time Communist union leader and expert in workers' rights, as well as social and political-economic development. For most of my field period at Calarcá, Roberto was the quality control manager. However, when Florencio, the packing plant supervisor, was moved to fill a vacant position as field supervisor, Roberto was given the position of packing plant supervisor. In this position, Roberto implemented numerous changes in the packing plant.

The most basic change was to post, in the packing plant, a list of all the workers' names, the number of hours worked, and how much they had earned each week. The term for this list, exclusive to the banana industry, is the 'papaya', apparently rooted in the UFCO of the 1930s. Roberto displayed the papaya so all the workers could see it, not only for their information, but also to increase their trust in Roberto as their supervisor (translated): "That way they can see that I'm not stealing from them."

Roberto also began posting a white board in the packing plant, which displayed, for every hour of the day, the number of boxes filled, a productivity ratio, and the cumulative total of boxes filled. When the productivity ratio dropped below a certain point, Roberto would write it in red ink. The board was used to motivate the packing plant workers to work faster. Roberto said he wanted a bigger board, so that for each hour he could convert the productivity ratio into Colones (Costa Rican currency) so that all the workers could see how much money they lost per hour when productivity dropped. Roberto reported that don Jaime didn't care for his boards or management ideas, but just about money, however, he argued that these numbers contributed greatly to motivating workers to make money.

Roberto also began a programme to train every worker for every job in the packing plant. This was not the norm in the banana industry, as workers generally remained at the same job, often for years, or even their entire career. Roberto argued that although the training initially involved more work, eventually it would provide a more flexible and adaptable packing plant, and that it would improve workers' appreciation for the work required by each position. Further, workers would be supervised from the catwalk, not by Roberto, but by another packing plant worker, on a rotating basis. These changes represented a sweeping departure from Florencio's abusive supervisory atmosphere, and from the industry norms.

The most major and far-reaching change that Roberto instituted was to train packing plant workers to perform fieldwork. This concept was radical, partly because there is typically a strict division between field and packing plant workers,

but mostly because those who were being trained for the field were women, which would address the sexist division of labour. Further, it would allow for pay equalization, as packing plant workers would not be limited to working only on days on which there was a cutting order. Roberto argued that workers had the right to full-time work, and that the current practice was foolish because there were times when there weren't enough field workers to complete the required tasks. Although Roberto said that don Jaime did not completely support the venture, he had been given permission to begin training a team of four packing plant women in field techniques.

b) Limits to Change

All of the above strategies were restricted regarding the degree of change possible. These restrictions, from a variety of sources, reveal elements of the power structure within the banana industry, as well as some of the power mechanisms employed.

i) Attitudinal Resistance to Change

At Calarcá, attitudinal resistance to change on the plantation could be seen among both workers and managers. As packing plant supervisor, Roberto initiated many changes, but not all workers supported his ideas. Roberto was trying, for instance, to create an atmosphere in which everyone was responsible for packing plant productivity, by posting a productivity board, training everyone for every position, and having a fellow worker supervise from the catwalk. Although many workers liked and appreciated these changes in the work environment, this attitude

was not unanimous. Mario, who drove the tractor and worked in the packing plant explained (translated):

> This is not good. Roberto is the supervisor and it's up to him to place limits on the workers. It's already a boring job, and people are sensitive and feel bad when Roberto tells them this [that workers are not doing a good job]. You've got to respect this, because in the end he is telling them they're not working hard enough, but then not doing anything to make it better. You can't be too soft, you've got to do your job. Being soft doesn't help the workers. ... The workers don't like this, it's not right.

There were two instances in which fear of the workers was given as a reason for the reluctance to implement certain changes. The first example comes from don Jaime, who, although he wanted to implement social change at the plantation, stated that (translated): "because of the mentality of banana workers, it is complicated to put it to them. They're going to think that I'm a Communist and that I'm against company principles."

Interestingly, the second example is from Roberto himself, who also expressed concern about the response from his workers. Because of his background and training with the Communist banana unions, Roberto was well aware of the effects of the chemicals used in banana production. In fact, Roberto blames the chemicals used in production for his own sterility. Many of the workers were unaware, however, and used virtually no protection from the chemicals. I asked Roberto whether he thought that as their supervisor he had the obligation to inform them. His response was (translated): "to be honest, I don't want to tell them because I don't know how they'll respond. I'm afraid to tell them." When I said,

"your fear versus their right to know?" Roberto nodded grimly. Clearly, for him there were no easy answers.

Another important limitation to change on the plantation was the attitude of management, of which several examples were seen at Calarcá. As discussed earlier, Balto, the field manager, held that workers' rights and giving workers the "benefit of the doubt" were simply excuses for poor supervision. In this example, quality control was used to justify the failure to address workers' rights.

Don Jaime provided another example of a negative attitude when he claimed that in order to implement any changes on the plantation (translated):

> much support, backing and conviction are needed on the part of those responsible for the company to firmly believe that this is something that will directly benefit the company, and when this doesn't happen, nothing can be done. ...

Don Jaime claimed that even affordable and feasible changes were not implemented at Calarcá because of a lack of support by don Héctor, the owner (translated):

> Economic support [is needed], more than anything. And this support requires one of the owners of the company, because the majority of banana plantation owners have the mentality that business must mean profits, and profits are not to be reinvested into social aspects of workers. ... The owners (of Calarcá) believe, for example, that business is very unstable, and so they are fearful of investing in social aspects of workers. And they have had many experiences in other parts of the world, like in Colombia, where the workers have been given many benefits, but in the end this was turned against the owners of the company.

Although he claimed to support change on the plantation, the following incident provides evidence that in practice perhaps don Jaime was not very

sympathetic to new ideas. Roberto claimed to have spoken to don Jaime about the illegal payment of the Semana Santa holidays. Apparently, don Jaime's response was that Roberto was teaching the workers "vices"[5].

ii) Structural Barriers to Change

Several structural factors also posed limits to change. The following section examines worker turnover, organizational conflict at the plantation, and managerial power.

The high degree of worker turnover also limits change within the banana industry. According to don Jaime (translated):

> Other things have to be done; it's not just money, but to look for other possibilities, look for the way for workers to have their own roof, that workers have access to credit so they can study. Clearly, tons of things could be done, but this requires constant support, and these are not things that can be resolved within the three months.

Obviously, the lack of an active union or solidarista association further exacerbates this situation, and as discussed earlier, the lack of an effective worker association can also be partially attributed to high worker turnover. These two factors should be considered structural limits to change within the banana industry, because both are industry-wide characteristics, and both generally benefit management. Further, although many managers claim otherwise, both ineffective worker organizations and high worker turnover could be at least partially addressed by management, if they were willing.

[5] I confirmed with Roberto that "vices" [vicios] was the exact word that don Jaime had used, and also asked him to define "vicios" to determine if there was a linguistic difference in the use of the word in Spanish. Roberto responded that smoking and drinking would also be considered "vicios."

Worker-management conflict also presents a substantial barrier to change. This degree of conflict, according to Mintzberg and Woodward (Mintzberg, 1993:167-8), is typical in organizations such as banana plantations, and tends to be structured in:

> The magnified divisions of labor, horizontal and vertical, the strong departmental differentiation, the rigid distinction between line and staff, the motivational problems arising from the routine work of the operating core [front-line workers], all these permeate the structure with conflict. As Woodward noted, in these types of organizations, the ideal social and technical system simply do not correspond: 'Technical ends may best be served by conflict and pressure. Many of the conflicts that occurred in the firms studies seemed to be constructive by making a contribution to end results, and it was certainly not true to say that the most successful firms were those with the best relationships and closest identification between the staff and the company'. ... The problem in the Machine Bureaucracy [and therefore in banana plantations] is not to develop an open atmosphere where people can talk the conflicts out, but to enforce a closed, tightly controlled one where the work can get done despite them.

One example of this conflict was seen in the field supervisors' advocacy for the field workers, who were only partially successful in persuading Balto, the field manager, of their position. The field workers were paid for replanting under a separate contract, and the supervisors successfully convinced Balto to respect their strategies. However, they were unable to completely resolve the issues, for example the illegal payment of the Semana Santa, and standards for field practices and quality control. There was no real solution for this permanent conflict between the supervisors and their manager.

Mintzberg (1993:168) considers this typical for machine bureaucracies, such as banana plantations:

> conflict is not resolved in the machine bureaucracy; rather, it is bottled up so that the work can get done. And as in the case of the bottle, the seal is applied at the top; ultimately, it is the top managers who must keep the lid on the conflicts through their role of handling disturbances. This degree of conflict between the field supervisors and the field manager presents significant obstacles to the implementation of any practice that deviates significantly from the current norms of banana production.

Workers who deviate severely from the wishes of management are demoted, put on probation, moved to a different job, blacklisted or fired, which also limits the possibilities for change. On one hand, this behaviour may reflect legitimate management practices to maintain standards and quality control. On the other hand, it may reflect social control over workers whose practices or styles are seen to threaten the power structure within the plantation or the industry. This type of social control, which limits change and resistance on the plantation, is documented by Bourgois (1989, 1994), Jansen (1998) and by members of Foro Emaús, the community action group that focuses on the Costa Rican banana industry.

At Calarcá, there were two significant instances of retaliation against workers because of their social policies and management styles. The first one involved Francisco, a field supervisor, and the second Roberto, in his position of packing plant supervisor.

Francisco was particularly concerned with defending the rights of his workers, and giving them the "benefit of the doubt." As related above, Balto, the field manager, often perceived this position as a lack of leadership, and not placing sufficient emphasis on the quality control of field practices. As a result of this

disagreement, Francisco was given mandatory, paid time off from Calarcá, to look for another job.

Although it might seem that this management stance implied almost certain dismissal, this was not so. At Calarcá, being put on probation or fired was considered an appropriate means to improve personnel at the supervisory and managerial levels. Don Jaime recounted a similar situation with Balto, the field manager (translated):

> In order to have Balto as I have him now, I had to fire him from the plantation twice. It's now the third time that he works with me at the plantation, and each time he went and returned, he came with a better attitude. ... Before, you couldn't give him any responsibility because he had the mentality of a field worker.

Balto and don Jaime thus provided Francisco with two options: he could either change his supervisory style, and ask to continue working at Calarcá, or he could find another job. Although Francisco had not been definitely dismissed, his treatment represented a clear statement by management that there were limits to the amount of worker advocacy that would be tolerated. At the end of my field period Francisco's status with Calarcá had not been resolved.

Roberto was fired from his position as packing plant supervisor, which offers a blatant example of curtailing change within the banana industry. As was discussed, Roberto had made significant and radical changes in the packing plant. Although the events surrounding his dismissal are complex, as are the justifications, it is clear that the primary reason for his dismissal was his management style, and the implementation of practices that were perceived as too radical.

iii) Transnational Power and Quality Control: "Good Managers Always Have Good Workers"

The following section discusses Roberto's departure from finca Calarcá. The events and justifications surrounding his dismissal as packing plant supervisor are complex. Nonetheless, they demonstrate the actual manifestation of the power structures encompassing both Calarcá and Dole, its marketing company. In this context, the previously discussed power of the transnational quality inspector regarding quality control and command over independent suppliers is of primary importance. This incident also illustrates the actual context of working conditions on the plantation, as well as the limits to resistance.

Israel, the regular Dole quality inspector for Calarcá, was absent for a number of weeks, and was replaced by another inspector, named Roberto (referred from here on by the diminutive Robertito to avoid confusion). According to Roberto, Robertito wanted a relative of his to be hired in the packing plant. Roberto refused, and told Robertito to talk to don Jaime. Subsequently, don Jaime told Roberto to hire the relative, but he refused, claiming that it compromised his position. As a consequence of this incident, Roberto neither liked nor trusted Robertito, and reported that Robertito always ate his lunch in the packing plant instead of in the soda with the other workers, as had Israel. It should be noted here that Roberto's wife, doña Vera and daughter Xinia ran the soda. Roberto felt that Robertito's refusal to come to the soda indicated bad feelings or guilt about his actions. Nevertheless, Robertito continued to pressure Roberto into hiring his relative.

A critical event occurred when Robertito told Roberto that the fruit on a partially loaded truck was bad, and that he would have to unload the truck. Roberto refused, saying that the fruit shouldn't be designated as bad after it was packed and that Robertito knew Roberto's record for quality, and that the fruit was not bad. (Prior to being the packing plant supervisor, Roberto was the quality control manager). Further, of all plantations marketed by Dole, Calarcá was ranked second for quality, and the number one plantation was one of Dole's own plantations. Roberto later obtained the quality control sheets from Dole for the weeks prior to this, which confirmed that the fruit quality was just as high as it had been for the several months previous.

Robertito called in Israel, and during a two hour delay, the packing plant workers didn't work. Israel told Roberto to unload the truck and load new fruit into it, during which time Israel would check the unloaded boxes. Roberto refused, telling Israel that he knew his quality record and that this order undermined his expertise and authority. Don Jaime was called in and Roberto gave him an ultimatum that the packing plant workers would not work until he decided whether or not the bananas were to be shipped. Don Jaime agreed with Roberto that the bananas should be shipped without being checked, and Israel supported this decision.

Despite the conflict resolution in his favour, Roberto felt that his authority was severely compromised if the quality of fruit could be called into question at any point, given his record and the quality control statistics kept. Roberto therefore

gave an oral resignation to don Jaime, and asked for a recommendation to look for work elsewhere, which was granted. However, Roberto received a letter, signed by don Jaime, and delivered by Balto, which stated that Roberto was leaving because the fruit was bad and there was a problem with the shipment. Roberto was to sign it. Roberto refused to sign or to concede he had left Calarcá under bad conditions, or because of his own failure. The following day, Roberto took a letter to don Jaime, which stated that he was resigning under good service conditions, and made him sign it. This allowed Roberto to receive severance pay.

I asked Roberto whether he thought his radical management practices in the packing plant had contributed to this incident. Roberto responded that although don Jaime had been good to him personally, he could not respect him as a manager because he was "two-faced," and supported this assertion with several examples. Even though it would cost Calarcá some money, Don Jaime had initially supported Roberto's plan to train packing plant workers in the field to provide them with full-time work, and that the early stages of the scheme went well. Two weeks prior to the questionable fruit incident, don Jaime had told Roberto that he liked what he was doing with the workers, and had given him the company bus to take the workers on an outing. Yet, not long afterward, don Jaime inexplicably reversed his decision, and cut the programme to have packing plant workers in the field completely. Roberto also considered don Jaime "two-faced" because although he initially decided that the fruit was fine and that it would be shipped, the letter--

brought by Balto, instead of being delivered personally--stated that Roberto was fired because of poor fruit quality.

I asked Roberto to what degree the relationship between Calarcá and Dole was a contributing factor. He responded that it was critical, that everything on the plantation was done to keep Dole happy. Roberto argued that don Jaime was too close personally to Israel to do a good job, and pointed to the fact that don Jaime and Israel often drank beer together in Bataan.

Besides Roberto's interpretation of the events, there are other indications that Dole was involved in pressuring Roberto to leave Calarcá.

I asked don Jaime whether Dole was concerned with the recent management changes. He responded that, "Dole is not concerned because the majority of the changes were for the better."

I also spoke at length with another Dole representative named Victor, who, according to Héctor Jr., the owner's son, is liked and well-respected by management both at Calarcá and Dole. He is reputed to be extremely accurate in his assessments of people and situations.

Victor's assessment of Calarcá was that the quality was good, but that there was an under-trained workforce, evidenced by the fact that they didn't work very fast or have a "disciplined rhythm," which affected the plantation's profitability. Asked if this affected the quality of the fruit, and if he was concerned, he responded, "No, they're just not getting good returns." I asked him why he thought this was the case, and he said that he had a personal expression: "Good Managers Always

Have Good Workers." "Do you mean in the packing plant, specifically, they have this problem?" "Yes." "Do you think it is a problem of higher management not pushing them?" "No, Jaime is a good, hard worker. ... and 'Good Managers Always Have Good Workers'."

Don Héctor's explanation of the situation with Roberto further reveals the subtlety of quality control as a mechanism of power (translated):

> Roberto is someone who knows bananas. ... But what happened? He didn't measure up, even though he knows that he can do it, but he didn't fulfill his duties, he didn't devote himself to the plantation. ... the time came when I couldn't put up with that man, I couldn't have him continue. And it's not that the company is committing injustices with people, or that there is arbitrariness on the part of the administrator or the managers with people. No, it's simply that the work standards are high, and that is the only way that the plantation will be successful. Because the banana industry requires that it be this way, that good work is done, that things are done well, and for that reason we must be demanding. I believe that it is for this reason that we lose so many workers, because they don't put up with it.

Chiqui, the previous packing plant supervisor who had been fired for taking several days' vacation after having been denied permission, replaced Roberto. In response to my questions, Chiqui said that not much had changed in the packing plant other than that tighter supervision was needed. He said he didn't intend to make any significant changes. It became evident that Chiqui meant that no changes would be made from the way things had been done before Roberto became packing plant supervisor. Roberto's productivity and progress boards, as well as the 'papaya' (display of wages earned) were removed. On one particular day, work was going particularly slowly in the packing plant, with a truck was to be loaded before lunch time. Elena, a packing plant worker who had been training in the field with

Roberto, told me that work was harder with the boards gone because she was unsure how much was yet to be done. She also complained that the 'papaya' was gone. I asked her if they could ask to have these benefits replaced because everyone was accustomed to them. She responded negatively, "We're like cows here."

Israel returned, replacing Robertito as the Dole inspector. His first comment to me was that the packing plant looked really good, with everybody working efficiently, and nobody talking.

Roberto looked for work for several weeks after leaving Calarcá, without success. His family continued to run the soda. Don Jaime eventually offered Roberto the position of patio supervisor. Ivan had--perhaps conveniently--been fired, leaving the position vacant. The position of patio supervisor required no worker supervision and the salary was significantly lower than that of packing plant supervisor. With no work prospects, six children, and with the encouragement of his wife who didn't want him to work far away, Roberto swallowed his pride and took the job.

5. Conclusion

Despite the relatively high wages paid to banana workers, questionable and even illegal working conditions are common within the banana industry. These labour practices directly relate to the macro features of the banana industry, largely due to the strong production emphasis on quality control and profitability. These working conditions are well documented, understood, and, to a large degree, accepted within the banana industry, and can be considered conscious and

deliberate, if undesirable, consequences of banana production for export. In this sense, quality control and profitability limit worker conditions. In part, this is because the primacy of quality control and profitability result in virtually no attention given to the 'extraneous' concerns of worker conditions.

However, as seen throughout this chapter, quality control is often used as an excuse or an active strategy employed in order to maintain the power structure within the industry or on the plantation, or to justify questionable worker conditions. It is for this reason that the Foro Emaús argue that quality control is a deliberate system of worker exploitation, a position consistent with a world systems approach to the issues. The Foro Emaús (website) argues that:

> It was imperative to fight to unmask this fraudulent ideological strategy ... [of] the internal legal maneuvers that sought to stimulate the over exploitation of workers with new ideas about labor relations, such as 'excellence and total quality' which in practical terms was (and is) an intensification of the use of labor with psycho-labor techniques involving individual competition, which result in more work, lower salaries, and worker division.

## Chapter 9: Consequences of Macro Features of the Banana Industry Beyond the Plantation

The previous two chapters examined some of the consequences of the macro features of the Costa Rican banana industry from the micro perspective. These discussions showed that macro features (transnational power; market oversupply exacerbated by the 'Banana Blunder'; capitalist value on competition and profit; chemically-dependent bananas, and limited pressure for environmental sustainability) have collectively shaped the industry, and have had significant consequences at the plantation level. However, the consequences of these macro features extend well beyond the plantations or the industry itself. This chapter reports the effect of some of these consequences two areas: 1) environmental degradation, and 2) underdevelopment and marginalization.

Environmental degradation directly results from the macro features of the banana industry in a number of ways, which can be explored by focusing on the two main causes of this degradation: 1) high levels of production, and 2) large amounts of toxic materials used in production. As previously discussed, high levels of production generally result from the international demand for bananas, and specifically from the anticipated changes in demand by the E.U. The use of toxic materials results from: 1) emphasis on quality control; 2) industry dominance of chemically-dependent Cavendish variety bananas; 3) foreign and transnational power associated with the banana industry at macro and industry levels; 4) First World chemical usage with limited negative consequences, and 5) limited pressure

for environmental sustainability. Each of these factors has been discussed in previous chapters.

As a result of the intense focus on quality control, productivity and profits, virtually no attention is paid to the seemingly 'extraneous' concerns of environmental degradation, or of local underdevelopment and marginalization. This situation is exacerbated by the importance of the banana industry to Costa Rican National development. Further, an examination of the consequences of the banana industry beyond the plantation reveal that, to a large degree, those most negatively affected are the already marginalized within the broader Costa Rican society. Thus, environmental degradation, and underdevelopment and marginalization appear as implicit and intentional consequences of value choices made within the banana industry, vis à vis production, profit, and power. These conditions reflect a world systems approach to these issues.

1. Environmental Consequences

Two factors of banana production lead directly to environmental consequences. The first, and most serious, is the use of large amounts of agrochemicals as an integral part of banana production. As has been discussed in several previous chapters, multiple agrochemicals are used on a regular basis in banana production. The second issue leading to environmental consequences is simply the scale of banana production, obviously an important factor given the toxicity of the agrochemicals mentioned. However, the size of production is also important with respect to waste products, even those not considered toxic. That is, a

number of waste products from banana production are biodegradable, but because of the amounts produced have considerable environmental impact. This section examines waste products generated by banana production, and then discusses some of the resulting environmental consequences.

a) Waste Generated by Banana Production

Banana production waste divides into four general types: 1) chemical; 2) liquid; 3) non-organic solid, and 4) organic solid. I begin with a brief examination of each.

As discussed previously, chemicals are used extensively in banana production, partly because of the high quality standards required, but also because bananas are a monoculture production system. According to Hernández (1997:69):

> Monoculture production systems, like bananas, increase the concentration of food sources for other organisms (i.e. insects, bacteria, and fungi). As a result of an abundant food supply, such organisms multiply readily and begin to compete with humans for the harvest. Consequently, high-production systems require high levels of inputs, not only to produce a product, but also to eliminate competing organisms.

Chemicals used include fertilizers, herbicides, insecticides, nematicides, and fungicides, as well as chemicals for sigatoka disease control. Between 1990 and 1991, approximately U.S. $26 million was spent on agrochemicals for banana production (García & Chacón, 1995:74). This figure does not capture the full effects of the expansion in banana production associated with the anticipation of the opening of the E.U. market.

Several problems arise from chemical use. First, pests and soil organisms that the chemicals are intended to reduce or eliminate can become resistant, creating the need for higher input quantities new chemicals. Further, the chemicals used are toxic not only to the intended recipients, but also to other plants, animals, and humans. Although this widespread toxicity is a problem in its own right, further problems arise when the chemicals inevitably spread beyond the plantation through the air or water systems. Dr. Ortiz, the current executive director of SINAPROMA (Sistema Nacional de Protección y Mejoramiento Ambiental; National System of Environmental Protection and Improvement), considers pesticides and agrochemicals the most important national environmental pollution problem in Costa Rica (Tropical Sciences Center, 1982).

Sample data for the amounts of some chemicals used in annual production as seen in 1990 at EARTH College appear in the chart below.

| CHEMICAL USED | TOTAL AMOUNT | AMOUNT PER HECTARE (/305) |
|---|---|---|
| **Herbicides**: | | |
| Gramoxone | 1066 litres | 3.5 litres/ha |
| Karmex | 323.5 kg | 1.0 kg/ha |
| Triton | 127.8 litres | 0.4 litres/ha |
| **Nematicides**: | | |
| Temik | 21,360 kg | 70.0 kg/ha |
| Mocap | 40,290 kg | 132.1 kg/ha |
| Counter | 13,680 kg | 44.9 kg/ha |
| **Fungicides**: Mertec | 110.5 litres | 0.4 litres/ha |
| **Other**: Alum | 1,368 kg | 4.5 kg/ha |

*Chart compiled from data from Lizano & Murillo, 1991; CORBANA annual reports*

Chacón and Hernández S. (1994: 80) report that at several GEEST plantations chemicals used included:

| CHEMICALS USED AT GEEST PLANTATIONS IN 1994 | |
|---|---|
| **Herbicides** | Paraquat (common)= Gramoxone (brand) |
| **Nematicides** | Bacillus thuringiensis (common) = Dipel (brand)<br>Terbufos (common) = Counter (brand) |
| **Fungicides** | Benomyl (common) = Benlate (Brand) packing plant<br>Mancozeb (common) = Vondozeb, Dithane (brand names) sigatoka control |
| **Pesticides** | Propiconazole (common) = Tilt (brand)<br>Glifosate (common) = Ranger (brand) |
| **Other** | Clorpirifos (common) = Dursban (brand) in plastic bags |

The chemicals used at the EARTH plantation and at the GEEST plantations are similar to those used in production at finca Calarcá, except that Calarcá did not use nematicides. It should be noted that chemical fertilizers are not included in either the above tables.

Regarding the chemical wastes generated by banana production, Soto (1992) states that 20% of the spray used for sigatoka disease control is lost to wind drift. Apart from this figure, there is considerable difficulty in evaluating the amounts and consequences of chemical wastes. Determining even the types and amount of chemicals used is very difficult, partly because the industry is unwilling to reveal this information, not only because of competition, but also because it fears public and foreign reprisal. This lack of cooperation by the industry severely hampers research designed to assess and evaluate environmental consequences of banana production. These issues were discussed previously.

As noted, one of the most important means of chemical transmission is via water systems, and the spread occurs in two ways. First, a system of canals routinely drains water from the plantation to lower the water table; otherwise the

roots of the banana plants would rot. Second, water itself is important for banana production: it is used in tanks is used to cushion the bananas from cosmetic damage, as well as to remove staining latex from the cut stems. Hernández (1997:86) reports that the plantation at EARTH College uses approximately 12 litres of water per second to process 4000 boxes of bananas during a 10-hour day, which amounts to 108 litres of water per box of bananas exported. Although the banana production regions of Costa Rica do not lack available water, there are generally no recycling or filtering systems for the water from the packing plant or from the drainage canals, and therefore the water, contaminated by chemicals used in production, flows directly into local river systems. Thus water becomes a significant source of chemical transportation.

Solid waste also contributes significantly to the environmental impact of banana production. Again, this is partly due to the volume of waste generated, but also due to its nature. Hernández (1997) reports that in 1990, the waste generated per day in all of Costa Rica was 11,764 tons; waste generated daily by banana production was 2,626 tons, 22% of the total. These figures do not reflect the massive increase in banana production that took place in the early 1990s.

Solid waste can be divided into two general types: organic and non-organic.

Organic solid wastes include the banana latex, crowns, floral residue, stems, and fruit unsuitable for export. Although organic, and therefore theoretically capable of being absorbed into the ecosystem, these products must be considered as waste. First, all these products contain chemical residue, and therefore have the

potential to pollute soil or water. Second, the scale of banana production makes this type of waste significant. Hernández (1997) calculated that in 1994, 946,900 tons of organic solid waste was generated by banana production in Costa Rica, 54% of which consisted of substandard bananas. As previously discussed, these bananas are often sold at local markets, used as cattle feed, or processed into baby food and banana purée. Although some plantations use these options to some extent, the scope is currently unknown. Also, even used collectively, and to a great extent, these strategies are not sufficient to eliminate the impact of the current levels of substandard waste bananas.

Another organic waste product that could be recycled is the banana stem. Stems are handled in different ways: sometimes they are distributed among the banana plants as fertilizer; sometimes they are dumped in a centralized location and left to rot. The latter solution can be problematic if, as is often the case, the dumpsite is adjacent to a water source. In these cases the stems can clog or alter the stream or river, and also leach chemicals and latex into the water. EARTH College has developed another option for stem management, by recycling the fibre into paper. However, this process has not been adopted elsewhere, and so stems continue to be a significant waste product.

Despite the various processes for recycling organic solid waste, the total volume of these products far exceeds the capacity of any plantation to effective recycle within its own boundaries. The large amounts of waste, as well as the lack of even minimal recycling mechanisms on banana plantations, leads to wastes being

transported elsewhere, primarily via waterways. As will be further discussed, this transfer contributes to the pollution of other ecosystems.

The final type of waste is the non-organic solid, which includes chemical plastic bags, twine, plastic ribbons, and agrochemical containers. This mixture constitutes a significant proportion of the solid waste generated in banana production. In 1994, it is estimated that 11,592 tons of these wastes were generated by banana production in Costa Rica (Hernández, 1997). Recently, recycling facilities have been created to partly address the problems associated with the non-organic solids. Nearby facilities recycle twine, plastic ribbons, and chemical plastic bags. Hernández (1997) reports, however, that these facilities process only 70% of the chemical plastic bags, and 20% of the twine and plastic ribbons. As a result, although there is a net decrease in non-organic solid waste, a large proportion remains.

The waste generated by banana production, based on 1994 figures, is summarized in the table below.

| PRODUCT | WASTE GENERATED (ANNUAL) | RECYCLED |
|---|---|---|
| **Chemical Waste** | | |
| fertilizers | incalculable | |
| herbicides | incalculable | |
| pesticides | incalculable | |
| nematicides | incalculable | |
| fungicides | incalculable | |
| alum | unknown | |
| sigatoka disease control | 20% lost to drift | |
| **Liquid Waste** | | |
| water used in packing plant | 12.1 million cubic metres | |
| **Organic Solid Waste** | | |
| banana latex | unknown | |
| banana crowns and floral residue | 53,900 tons | |
| stems | 385,000 tons | |
| substandard fruit | 508,000 tons | unknown |
| **Total Organic Solid Waste** | **946,900 tons** | |
| **Non-Organic Solid Waste** | | |
| twine and ribbons | 4,960 tons | 20%: total less recycle = 3968 tons |
| chemical plastic bags | 5,850 tons | 70%: total less recycle = 1755 tons |
| agrochemical containers | 782 tons | |
| **Total Non- Organic Solid Waste** | **11,592 tons** | **total less recycle = 5869 tons** |
| **Bananas Exported: 2,030,000 million tons** | **Total Solid Waste: 958,492 tons** | **total less recycle = 952,769 tons** |
| | **Solid Waste/Ton Bananas Exported: 47.2%** | **total less recycle = 46.9%** |

*Chart based on data from Hernández (1997) and from Soto (1992).*

As indicated by the chart and from the previous discussion, the amount of chemical waste, although currently incalculable, is nevertheless significant. This finding is especially critical since schemes to reduce the environmental impact of banana production, such as ECO-OK/Better Banana, and ISO 14000, do not require either a change in type, or a reduction in amount of chemicals used for production. Liquid waste in the form of water used in the packing plant, and from the system of drainage canals, is critical because of its transmission of chemicals. Great potential for reduction of organic solid waste exists, especially regarding stems and

substandard fruit. However, because of high levels of production and the chemical residues associated with this product, it must still be considered as significant waste. By recycling twine, ribbons and plastic bags, non-organic waste has been reduced by approximately 50%. Although this recycling is important, solid waste levels remain high: solid waste generated per ton of bananas exported is 47.2%; at the current level of recycling, this proportion drops only to 46.9%. Therefore, to evaluate the environmental consequences of banana production, each of the four categories of waste (chemical, liquid, organic solid, non-organic solid) must be considered.

b) Environmental Impact

The above discussion demonstrates that the four categories of waste mentioned are somewhat soft and interactive, and these aspects also carry implications for the environmental consequences of the waste products. For example, many solid wastes, organic or not, are contaminated with chemical residues, and then transported by liquid wastes off the plantation, causing pollution. This is consistent with theories of sustainable development, which look at interactive and synergistic processes that result in environmental degradation. Banana production thereby affects the environment in several different ways, some of which are explored in this section.

Banana production results in two broad types of environmental impact: 1) threats to biodiversity due to the land mass required for banana production; 2) pollution caused by waste products.

The first type of environmental impact is based on the mere existence of banana plantations. As discussed previously, the late 1980s and early 1990s saw a dramatic increase in banana production, so that by the mid 1990s it had taken up 50,000 hectares of land (CORBANA documentation). This expansion is concentrated in the Atlantic region of Costa Rica, in areas consisting of both wet and moist tropical forest. This type of geo-climactic contains the highest levels of biodiversity (Janzen, 1983). INBio, a Costa Rican institute on biodiversity, believes that Costa Rica contains up to half a million plant and animal species, roughly 5 percent of the world's total. This proportion is extremely high, given Costa Rica's small area. To date, less than 100,000 different plant and animal species (about 16%) have been classified (INBio website). Costa Rica's internationally well-known biodiversity has been the basis of increasing tourism, especially ecotourism.

According to INBio (website) and the World Conservation Union (UICN, 1995), banana production represents an important threat to biodiversity in Costa Rica. As a result, The World Conservation Union (UICN) and The Nature Conservancy, with the support of numerous Costa Rican national and local groups, have proposed a 'biological corridor' project, aimed at addressing threats to biodiversity and cultural marginalization due to the fragmentation of critical areas. That this type of project was proposed by internationally well-recognized environmental organizations indicates the seriousness of the problem.

As discussed there are four general types of waste products associated with banana production (chemical, liquid, organic solid, and non-organic solid), each of

which contributes to environmental pollution. The environmental consequences of this pollution will now be further examined.

These waste products affect various locations. First, and most obvious, are the plantations themselves. Banana production covers approximately 50,000 hectares of land, all of which has been contaminated by its wastes. In addition, significant chemical contamination has been reported around the airports used for the preparation of chemicals for aerial spraying (Hernández, 1997; MIRENEM, 1992).

However, the most significant environmental consequences of banana production stem from the flow of waste materials beyond the plantations into other ecosystems. As discussed earlier, this contamination occurs primarily through the flowing of waste products into local water systems. These water systems are abundant because banana production occurs within wet and moist tropical forests rich in streams and rivers. The potential for pollution is therefore very high, both because of the vast amounts of waste and because of the broad reach of local water systems.

Outlying significant environmental degradation, originating from all four types of waste (chemical, liquid, organic solid, and non-organic solid) has been well documented. Chemical residues have been detected not only in the out-flow rivers from plantations, but also in more distant rivers, and in local ground waters. These residues have had a disastrous effect on wildlife that previously thrived in and around these waterways. The presence of solid waste in waterways well beyond the

plantation has also been documented, including plastic bags and containers for chemicals, and organic solid waste. In addition to their chemical properties, solid wastes leads to the rapid sedimentation of waterways, making them inhospitable to life (MIRENEM, 1992; Chacón and Hernández S., 1994).

Chacón and Hernández S. (1994) performed a study that included sampling of the water of several rivers into which plantations' drainage systems empty. Their findings included ample evidence of twine, plastic bags, and chemical containers. The waters contained latex from banana plants, floral residues, and oil slicks. No fish, insects, larvae, or other animals were found in, or adjacent to the river. Chemical analysis of the water revealed significant levels of multiple chemicals used in banana production. The levels did not exceed those considered lethal for humans, but were high enough to be deadly to fish. It must be mentioned also, that although the levels found were not considered a mortal risk to humans, for the highly toxic nematicides, no level is considered safe regarding birth defects (Chacón & Hernández S., 1994: 80).

The effects of this type of pollution have been documented in reports on rivers that flow near banana plantations, and also in the Caribbean Sea. For example, silt and organic waste from banana production, detected flowing down the Río Estrella into the Caribbean, was blamed for the slow death of the Cahuita coral reef. Cahuita, 12 km south of the mouth of the Río Estrella, contained Cahuita National Park, the largest coral reef in the country, and a major tourist destination. (Tico Times, 12/6/91:1,14 cited in Jansen, 1998).

In addition, Tortuguero National Park is directly downstream from areas used intensively for banana production. This park comprises almost 20,000 hectares, and is the primary breeding ground for marine turtles. Four of the eight species of marine turtles worldwide nest in Tortuguero, including the green sea turtles. From several hundred to over 3000 female green turtles nest at Tortuguero annually. In addition, 60 species of amphibians, over 300 species of birds, and numerous species of mammals, including three species of monkeys have been documented in this park. However, sightings of chemical plastic bags used in banana production have also been reported (personal communications), raising the issue of vulnerability of nearby coastal protected areas and threats to this biodiversity.

2. Underdevelopment and Marginalization

The Atlantic zone has always been a peripheral region of Costa Rica, with higher levels of poverty and disease than the rest of the country. As discussed in chapter 3, the dominance of the banana industry and particularly the UFCO were important determinants of patterns of development within this region, as well as its peripheral status. Nevertheless, the recent expansion of the banana industry in the Atlantic zone, with a concomitant intensification of the macro features of the banana industry, has resulted in the increased marginalization of the region and its residents. This section includes a discussion of three issues: 1) the crisis in rural land holdings and poverty; 2) a crisis associated with increased malaria and

pollution-based health problems; 3) the socio-psychological marginalization of the region's residents.

a) Crisis in Rural Land Holdings and Poverty

Massive increases in banana production created a heavy demand for land in the Atlantic zone, particularly around Limón and Matina. At that time the government declared the Atlantic area as a 'banana zone'; both directly, and through CORBANA's banana development plan (Plan Fomento Bananero), the government directed financial resources toward increased production of export bananas. However, this region was, and is, populated largely by peasant farmers, because, starting in the 1960s, the Institute of Agrarian Development (IDA, formerly the Institute of Lands and Colonization, ITCO) parceled out land in this region to rural peasants. The programme was designed to promote peasant agriculture based on self-sufficiency and provision of local markets. The IDA provided technical support, and maintained administrative responsibility of the lands, as well as the agricultural development of the region.

However, with the impetus to increase banana production, these farmers were seen as obstacles to the 'development' of the 'banana zone'. As a result, measures were put in place to pressure the inhabitants to dedicate their lands to the development of new banana plantations. In 1989, a governmental 'Banana Plan' was presented to the residents of Sara de Bataan, whereby the residents would agree to dedicate their lands exclusively to banana production, to sell the fruit only to the banana company, and to mortgage their land in order to finance the project. The

company, in turn, would provide technical advice, buy and market the bananas, and provide salaries to participating residents. In addition, the IDA would supervise organization of the workers, provide necessary land titles, assist in acquiring financing, and oversee contract compliance. The IDA announced that, "in the short term we will have the joy of seeing peasant farmers for the first time producing bananas and living under better conditions." There was also propaganda that ideologically supported the 'Banana Plan', as was evidenced by a road sign outside the town of Bataan, which proclaimed: "Let's Export Because Exporting Is Good" (Exportemos Que Exportar Es Bueno) (Foro Emaús; personal communications).

With exception of twelve farmers, all the residents of Sara de Bataan joined the 'Banana Plan', and according to Foro Emaús, those twelve were harassed and pressured to participate and sign the contract. Foro Emaús documents that the IDA sent official letters threatening them with the cancellation of the adjudication of their lands if they did not enter into the 'Banana Plan'. The letters (cited in Foro Emaús documentation) stated that:

> if it were necessary, measures would be taken in those cases of land owners who are not in accord with the establishment of banana production, with legal procedures, which we, as the Institution are authorized to apply, be it by procedures of nullifying land titles, or by the revocation of the adjudication of the lands. ... We hope, therefore, that you reconsider immediately your position, so that you may join us in consolidating this grand project in the short term. We reiterate that our only intention is to procure the well being of the small farmers and we are sure that with this productive project we will achieve this.

These farmers approached the Church in the Parish of Bataan, which took on their cause, first with the IDA directly, then by eventually filing a Recourse of

Unconstitutionality against the IDA. The verdict was in their favour, stating that the IDA did not have the authority to take away the farmers' lands.

Despite promises of progress and financial security, by the mid 1990s, the 'Banana Plan' was in financial crisis. The company could not fulfill its financial obligations of salaries and benefits to farmers, or even, eventually to the Banco Popular, from which it had received financing (La Nación, 5/10/94; La República, 4/3/95; Foro Emaús). Yet the residents of Sara de Bataan's mortgages, which proportionately financed the project, suffered the greatest financial blow.

In part, the failure of the 'Banana Plan' in Sara de Bataan was due to the massive oversupply caused by the 'Banana Blunder' of expecting an expanded European market. But it was the residents of Sara de Bataan who suffered the consequences of the Costa Rica's participation in the 'Banana Blunder'. Self-sufficient, small-scale development in Sara de Bataan was replaced by massive banana development, and the subsequent spread of personal debt. In 1997, the residents of Sara de Bataan, the IDA, and the Banco Popular agreed upon a debt-restructuring package under which the farmers' debt would be canceled and the IDA would redistribute the land. Nevertheless, the residents of Sara de Bataan were left bitter and mistrustful, with lands that had once supported multiple crops and fruit trees now covered by chemical-laden, useless banana plants, but (EIU, 1997, 1:17; Foro Emaús).

Gerardo Alfaro of the Foro Emaús (website) laments:

> Those happy and healthy peasants with their small farms, resembling beautiful diversified gardens that dominated much of the area along the Saopin Highway to Limón, in Matina, Cuba creek, Siquirres during the first years of the 1990s, were erased with one sweep, and replaced with a hideous landscape, an interminable sea of banana plantations, tattered banana workers with sad faces, women and children with pale semblances and anguished by the psychological pressures of this green hell. Where are those little houses surrounded by dense forests, cacao crops where the monkeys and birds, and butterflies lived? Annihilated! Forever, annihilated by the greediness of powerful Mr. Banana Dollar.

Following a century of underdevelopment and poverty in the Atlantic zone of Costa Rica, during the transformation of the area into a banana production zone in the 1990s, poverty levels actually increased. According to the Economist Intelligence Unit (1997, 2:30), "poverty levels have risen in the Atlantic coast province of Limón. According to preliminary figures generated by the government's 1996 household survey, 6,503 homes in Limón province were under the poverty line in 1995, but this figure rose to 9,803 homes last year [1996]." Thus, despite promises and hopes to the contrary, the creation of the banana production zone did not result in a generalized increase in local prosperity. Poverty and high levels of job turnover and migration plague the region.

Don Jaime, finca Calarcá's administrator explains (translated):

> The banana worker ... has few opportunities, only the opportunity to work in a banana plantation, with a short work life. You don't find 50 or 60 year-olds in banana plantations, which confirms what I'm saying, that you have to improve conditions for the workers. ... For me, the one thing that worries me is that every day the banana worker is poorer. But God help it if someone says it's just a matter of time, because now, with this government...I'm sure that one day this situation is going to explode in Costa Rica. Every day the worker is poorer.

b) Health Crisis: Pollution and Malaria

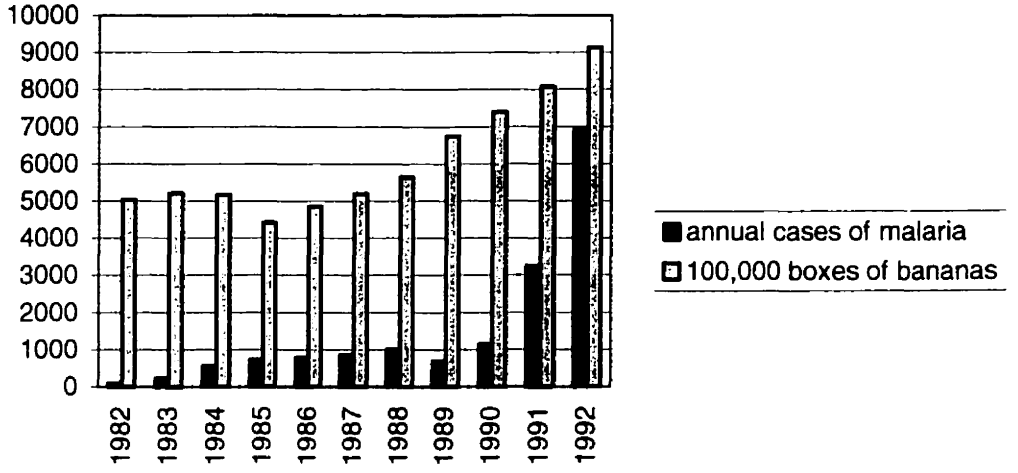
The effects of banana production chemicals on health are not limited to banana workers, but extend into a broader region. This spread is due to the chemicals going beyond the plantation, mostly through waterways, but also via other means of transmission. The Foro Emaús, for example, notes the effects on women who don't work on the plantations, but who, nevertheless, are exposed to concentrated levels of chemicals when they hand-wash the work clothes of family members (website). In addition, Odio (1993, cited in Mata & Mata, 1993) reports that 80% of the cases of aplastic anemia, a disease fatal to humans without a bone marrow transplant, occur in children from the banana zone. Locals also face the consequences of pollution from contaminated air, soils and water sources.

Mata and Mata (1993) also report that numerous health consequences from the increased intensity of banana production are partly due to increased levels of poverty, but also due to increased internal and external migration. They include increased risks of endemic intestinal parasites, malnutrition, dengue, shingles, cholera, yellow fever, and severe irreversible conditions due to exposure to agrochemicals.

Another consequence of increased banana production from the 1980s to the 1990s was a dramatic increase in the incidence of malaria in Costa Rica. Malaria increased dramatically from the early 1980s, from a low of 110 cases annually, to a peak in 1992 of almost 7000 cases (see chart and graph below). 1992 was also the peak year for the increase in banana production, just prior to the announcement by

the E.U. that it would not be liberalizing trade in bananas. The new cases of malaria were almost exclusively limited to the Atlantic zone, where the expansion in banana production was most intense. The risk of contracting malaria in the Atlantic zone is triple that of the rest of the country. In 1993, the number of cases dropped to 5,033, and by the mid 1990s, the rate was steady at between 4500 and 5500 cases annually. By this time, although banana production continued to increase, the development of new plantation lands had peaked (World Health Organization, 1993; Pan American Health Organization website; Weekly Epidemiological Record, 1996; Mata & Mata, 1993; Jansen, 1998; Tico Times, 29/12/95:6; personal communications).

| | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **annual cases of malaria** | 110 | 245 | 569 | 734 | 790 | 883 | 1016 | 699 | 1151 | 3273 | 6951 |
| **million boxes of bananas** | 50.6 | 52.2 | 51.7 | 44.3 | 48.6 | 52.0 | 56.6 | 67.5 | 74.1 | 80.9 | 91.4 |




*data for chart and graph compiled from Mata & Mata (1993) and CORBANA annual reports*

Leonardo Mata, an epidemiologist at Universidad de Costa Rica, explains that in 1957, with the support of the Oficina Sanitaria Panamericana (OFSANPAN), the government initiated an attempt to eradicate malaria. This attempt was quite successful, and according to Mata, malaria in Costa Rica was under control by the

mid 1960s. But the development of new plantations from the mid 1980s and 1990s, increasing deforested areas, and creating pools of water in drainage canals created mosquito breeding grounds. Poor social conditions, especially poor housing facilities, exacerbated the problem. The Pan American Health Organization also attributes the difficulty in addressing malaria to the high levels of migration and worker turnover on the banana plantations. In addition, Mata implicates funding cut-backs, and a lack of financing for national health programmes and for the Ministry of Health, partly due to structural adjustment programmes (Pan American Health Organization website; Mata & Mata, 1993; Jansen, 1998; Tico Times, 29/12/95:6; personal communications).

The lack of knowledge of the Ministry of Health about malarial conditions was revealed when I went to the Malaria branch to discuss the potential risks of fieldwork in the Atlantic zone, and of the necessity for prophylactic medication. Although the ministry gives out malaria medication at no charge, I was advised that the incidence of malaria in my proposed fieldwork area was negligible, and therefore medication would be unnecessary. The ministry officials asserted that malaria cases were concentrated in the Talamanca region (southern Costa Rica, near the Panamanian border). I later learned that to the contrary, in the previous year there had been approximately 2000 cases of malaria in the immediate vicinity of my fieldwork.

Fortunately, better information was available at the local level in the Atlantic zone most affected by malaria. Carlos Acevedo, the public relations manager at

Dole, provided me with information on malaria in the region, as well as a Dole company pamphlet on malaria prevention. In addition, I spoke at length with Rolando Castro Arce, a Red Cross worker in Bataan, who has had substantial experience with relation to the developmental problems of banana production in the Atlantic zone. He has worked at two banana plantations, was trained in agronomy, and worked for 18 years with the IDA (Instituto de Desarrollo Agrario, Agrarian Development Institute).

Castro Arce argued, as did Mata, that the government has increased the emphasis on medical treatments, and as a result, there have been no deaths from malaria since the 1960s (Pan American Health Organization website). However, the government has relaxed its guard in terms of preventative treatments and measures, especially the development of sanitation infrastructure. This lack is particularly critical in the Atlantic lowlands, because the topography is rather flat, and the poor drainage facilitates the proliferation of tropical diseases, such as dengue and malaria. Castro Arce points out, however, that the development of a proper drainage infrastructure would be an enormous task because of the flatness of the region.

Castro Arce argued that although the banana industry played an important causal role in the increase in malaria, addressing the problem currently focused on local education. Education has been the primary task of the Red Cross in dealing with malaria, although on occasion Castro Arce visits banana plantations to distribute medication and to talk with plantation administrators and workers. The

Red Cross education programme, aimed at local institutions such as schools and health centres, focuses on raising awareness of the importance of proper domestic practices to control malaria. These practices include installing screens on windows, and eliminating standing pools of water, breeding grounds for mosquitoes.

c) Socio-Psychological Marginalization

In addition to their socio-economic and health crises, Costa Ricans living in the Atlantic zone face multiple sources of socio-psychological marginalization. Mata and Mata (1993), for example, list some of the socio-psychological consequences of intensified banana production in the Atlantic zone as increases in: psychological disorders, illiteracy, stress, violence, suicide and murder. Marlene Castillo Jiménez of the Foro Emaús also expresses the experiences of those living in the Banana zone of the Atlantic (Foro Emaús website). Her passage clearly and poignantly expresses some of the subjective aspects of living in the banana zone:

> The following are some of the traits with which men and women banana workers feel their self worth as human beings diminished: Demeaned, because they can scarcely read and write, they do not dress in the latest fashions, and come from peasant traditions, commonly associated with little intelligence, simplicity and social inferiority. Frustrated, because despite their efforts to work arduously, their life conditions do not improve. Infantilized, daily in their interpersonal relations, both at work and at home, by bosses, fathers, spouses and companions. Ignorant, because they know of no other reality than that of the banana plantations, and they have always worked in labors considered socially inferior, requiring only great physical labor. Abandoned by the health and social security institutions that are indifferent to the violation of human rights on the banana plantations; by their families or spouses who have left them or treat them with violence; by the government whose policies go against the small independent farmers; by their own bodies that begin to falter and weaken under the hard working conditions; by their original families

who have stayed behind, in other regions and in other activities; by the banana company that gives them house and salary, but at the cost of an exploitation that silences and annihilates them as people and as collectivities. Dull, for not knowing the rules of etiquette, ways and habits of city people and intellectuals. Impotent, when confronted with an aggressor with a name but without a face, infinitely superior in economic and social power, and of whom they are dependent: the banana company. Finished, because they feel without the strength to fight or to resist their bosses, as well as the national social and political reality. Useless, because the body with which they have always earned a living loses strength and begins to fail because of the exposure to agrochemicals and long work days. Trapped, because even though they feel the anguish of the daily routine, they depend on a salary to clothe and feed their family, they have no other sources of employment and they have not learned any other skill, since from early ages they have only worked on the banana plantations. Disillusioned, because the anguishing routine provokes a state of stagnation of which they are aware: they remain there by inertia and because the social environment offers no other opportunities. Guilty, because they live in poverty, ignorance and an absence of opportunities or possibilities of growth as persons, they consider these circumstances as personal failures and not as direct effects of a system and an exploitative and unjust company that has impoverished them and has denied them the possibilities of development and of a more dignified life.

3. Conclusion

The consequences of macro features of the banana industry for the micro level extend well beyond the plantation. Two examples of these consequences are found in environmental degradation, and patterns of underdevelopment and marginalization. The massive amounts of waste produced by banana production, as well as the toxic nature of much of the waste has a significant environmental impact on ecosystems of and surrounding the banana plantations of the Atlantic zone. This waste has resulted in pollution of both waterways and soil, and presents a

significant threat to both animal and plant biodiversity in Costa Rica's most species-rich regions.

Increased banana production was to bring much needed economic development to Costa Rica's traditionally underdeveloped Atlantic zone. Instead, however, the intensification of banana production is associated with increased poverty, a crisis in rural land holdings, increased health problems, and intensified socio-psychological marginalization for the residents of this area. Thus, the negative consequences of the intensification of banana production are most pronounced for those who are already relatively marginalized in Costa Rica.

On one hand, there is significant potential for social change both in the effects of environmental degradation, and underdevelopment. However, many of the prospects are undermined by macro features of the banana industry, and exacerbated by its dominance of the region, as well as its importance to Costa Rica generally. For instance, although food self-sufficiency would represent an important contribution to the region, the Economist Intelligence Unit (1996, 4:32) reports that food self-sufficiency may not be WTO-consistent. This example highlights but one example of how the interests and dynamics at the macro/international level can have heavy impact at the micro or local level.

## Chapter 10: Conclusion

By way of conclusion to the study, this chapter reviews the basic grounding of the study, its theoretical orientation, objectives and main findings.

### 1. Study Review

The banana industry has remained central to Costa Rican development for just over a century. Yet the strong role of the banana transnationals within the industry and in relation to national development remain controversial. The prominence of the transnationals is but one of many links between the Costa Rican banana industry and the broader international political economy. Since the 1980s there have been several significant changes both within the Costa Rican banana industry and in the broader political-economic context. These changes, combined with the centrality of the banana industry to Costa Rican development, have resulted in a number of consequences at the micro level, both within the banana industry and within the local regions in which banana production is concentrated.

A basic premise of this study is that a coherent understanding of the banana industry and of its consequences can only be achieved through the appreciation of the complexity of its organization. To date there has been no broad-based examination of the banana industry which addresses political-economic, socio-cultural, and environmental issues at both the micro and macro levels. This is especially important because of the interactions among these types of issues and levels of analysis.

Although both world systems theory and modernization theory share the objective of explaining the broad-reaching issues associated with development, each has been critiqued because of its reductionism: world systems theory to reduces these issues to power, and modernization theory to factors associated with economic growth. However, the recent concern for environmental issues requires the use of theoretical tools sensitive to environmental issues. The reductionism of these theories of development denies that natural resources have intrinsic value and are part of ecological systems which are interdependent and can undergo permanent systemic changes, as well as contribute to the failure to address the process of industrialization as the primary cause of environmental destruction. In this respect, sustainable development brings important insights in addressing the Costa Rican banana industry that are inaccessible within the conventional boundaries of the traditional development theories.

Nevertheless, world systems theory provides a useful set of conceptual tools for examining and exposing the structural bases of the power relations inherent in the development process and of environmental destruction associated with the banana industry. However, in order to address the limitations of world systems theory it is necessary to employ an embedded model of world systems theory that will address the complexity of micro issues and environmental concerns relating to the Costa Rican banana industry.

The three basic objectives of this study were to:

1) document and analyze recent changes in the Costa Rican banana industry, and of the relevant events and dynamics of the broader political-economic context.

2) examine the complex organization of the industry by focusing on the interactions between the micro and macro levels of analysis, and among the socio-cultural, environmental, and political economic aspects of the banana industry.

3) examine the socio-cultural, environmental, and political economic consequences of the banana industry on the micro level, both for the banana industry, and for Costa Rica.

This study is based on fieldwork in Costa Rica from December 1995 to August 1996. A significant component of the fieldwork was a case study at finca Calarcá, in Costa Rica's Atlantic zone. It also included 1) fieldwork on other plantations; 2) a worker survey; 3) archival research; and 4) semi-structured interviews with individuals from key organizations associated with the banana industry.

2. Major Findings

A summary of the major findings of the study is as follows:

a) Export-Led Economic Development

There was some evidence of economic development based on a modernization theoretical approach. In the history of the development of Costa Rica and of the banana industry, the infrastructural and employment roles of the banana transnationals, and particularly the UFCO were instrumental in Costa Rica's integration into the world market, and in becoming one of the more developed countries in Central America. In addition, scientific-based production techniques, as

well as the use of technology, chemicals, and genetic engineering, are the cornerstone of a successful and competitive banana industry. This was true both in the early decades of the industry's development as well as at present. Another contributor to the success of the banana industry is its productive focus on quality control and profitability, and this too is consistent with a modernization perspective. So successful are these productive strategies that they are required by marketing companies. It is these factors which have contributed to the global competitiveness of the Costa Rican banana industry, and therefore to Costa Rican development.

b) Costa Rican Dependence on the Banana Industry and on Transnationals

Significant evidence of Costa Rican dependence both on the on the banana industry and on transnationals was found. This is supportive of the world systems approach. These dependency patterns are rooted in the historical period when Costa Rica's dependence on the UFCO and on the export of bananas for infrastructure, employment, and for foreign currency led to its label as the original 'banana republic'. The primacy of banana exports within the national economy also began in the historical period.

These dependency relations were exacerbated by the compliance of the Costa Rican government, as well as the use of public funds to further the banana industry because of its importance to national development. In this way, the importance of the banana industry to national development has led to its superseding some of the state's control over issues of national development. The influence of these factors on

Costa Rica's development patterns stems from the historical period and continues into the present.

c) First World Interests

A world systems theoretical approach also focuses on the importance of First World interests in the Costa Rican banana industry, of which there was ample evidence. The most obvious source of First World interests is the banana transnationals. This began with the monopoly of the UFCO in the historical period, whereby the UFCO transformed the banana into a regular food item in U.S. households. The operations of the UFCO represents clear evidence of U.S. imperialist interests which were for the benefit of the metropolis (U.S.) at the expense of the periphery (Costa Rica).

These First World interests continued to such an extent that the oligopoly of banana transnationals (Chiquita Brands International, Standard Fruit, and del Monte) markets approximately 80% of all Costa Rican bananas, and produces approximately half of all Costa Rican bananas.

Links to First World transnationals were also seen with respect to the chemicals used in banana production, whereby Costa Rica imports most of its chemicals from the First World. This benefits the First World not only because of the profits associated with the sale of chemicals, but also because it provides a disposal mechanism for chemicals banned in the First World. A further benefit comes from the resulting high levels of quality and productivity, and low costs of bananas.

First world interests are also evident through E.U. and North American consumers' high demand for inexpensive and near perfect bananas. This has contributed to the pressures for high levels both of quality and of productivity. It has also contributed to the long-standing global oversupply of bananas, as well as to the massive increases in production associated with 'the Banana Blunder'.

There was also clear evidence of the political interests of the E.U. and of the U.S. operating through the banana industry. One example of this is the E.U.'s attempt to maintain protectionist measures for its former colonies and protectorates, particularly with respect to the Caribbean banana coops. Another example can be seen with respect to many U.S. politicians who received hundreds of thousands of dollars and who consolidated their power through the manipulation of the banana industry.

d) Transnational Power

There was substantial evidence of transnational power within the banana industry, which represents significant support for the world systems perspective. This began in the historical period with the virtual monopoly of the UFCO, as well as its strong roles relative to development. In addition, there was evidence of foreign penetration into areas of national control, such as the state. The end of the UFCO's monopoly did not represent the end of transnational control over the industry, as this was replaced by the oligopoly with the addition of Standard Fruit (Dole), del Monte, and for a brief period, GEEST. Transnational power was also

maintained through the 1980s and 1990s with the increase in independent plantations.

The transnationals power was manifested in a number of ways, and had great market maneuverability. They had access to international capital and resources. They also were dominant in virtually all aspects of the banana industry: as producers and marketing companies, within the industry associations and committees. In their role as marketing companies, the transnationals transferred the costs and risks associated with plantation development, increased productive capacity and market fluctuations to independent plantations. The transnationals also had great control over the production techniques, as well as social and labour conditions of their independent suppliers. This occurred, in part through quality control, via the transnational quality control inspector, and through the control over contracts to buy fruit in a context of oversupply.

Politically, the transnationals were directly responsible for the reduction of banana taxes on several occasions. The transnationals were also seen to mobilize great international resources on their behalf through a network of empowered and wealthy contacts. This resulted in the U.S. championing Chiquita's cause with the E.U. and with Costa Rica. It also resulted in a suppression of the media against Chiquita through the U.S. justice system.

All of these examples of transnational power within the Costa Rican banana industry, and within the broader political economy are supportive of world systems theory.

e) Exploitation, Underdevelopment and Marginalization

World systems theory is concerned with the processes of exploitation, underdevelopment and marginalization which occur in the periphery. These were seen in several ways with respect to the banana industry. In the historical period, labour exploitation, especially based on ethnicity, was central in establishing the Costa Rican banana industry and the prototypical UFCO model of banana production. The historical period also saw as consequences of the banana industry political-economic instability, malaria, and ethnic conflict. There was also an inhibition of indigenous development and cultural identity, as well as the suppression of locally-driven development patterns which would have competed with the business strategies of the UFCO.

Many of these effects of the banana industry were continued to the present. In addition, banana workers are subjected to high levels of worker turnover, and the illegal payment of salaries, benefits, and holidays, and other questionable labour practices. There are few avenues for worker recourse, and solidarismo provided questionable benefits to workers. Banana workers are also regularly exposed to chemicals which are dangerous for their health, with few protection measures, sparse information, and no options for recourse.

These consequences are not limited to banana workers, but extend to the broader communities and region. There has been a further underdevelopment of the Atlantic zone, as well as the further marginalization of its residents. This was seen with respect to the following: 1) the crisis in rural land holdings and poverty;

2) the health crisis associated with increases in malaria and pollution-based health problems; and 3) the socio-psychological marginalization of the residents of the region. In addition, some of the broader social consequences of expansion in the banana industry include the following: 1) the disintegration of the family; 2) a decrease or loss in access to social, financial, and educational facilities; 3) stress associated with increased migration; 4) an increase in temporary or permanent poverty of workers and their families; 5) an increase in alcohol and drug use and addiction; and 6) an increase in illiteracy.

All of these provide support to the world systems perspective of underdevelopment, exploitation and marginalization associated with the banana industry.

f) Environmental Degradation

Sustainable development is particularly concerned with the processes associated with environmental degradation. This was well supported within the Costa Rican banana industry.

In the historical period, banana production, and especially the land rotation required because of Panama disease were the primary cause of deforestation in Costa Rica's Atlantic zone. It was in this period when the emphasis on scientific-based production techniques was entrenched into the organization of production.

Significant environmental degradation was evident both on the plantations, and well beyond their borders. Evidence of the following two main types of environmental impact was documented: 1) the threats to biodiversity due to the

land mass required for monocropped banana production; and 2) pollution caused by the waste products of banana production.

The intensive and regular use of numerous toxic chemicals has been and continues to be an inherent aspect of banana production represents the greatest cause of environmental degradation. This has resulted in air, soil and water pollution. Water pollution is particularly critical for several reasons. First, water becomes one of the primary means of transmission of chemical and organic waste into surrounding areas and ecosystems. Second, plants, animals and humans are dependent on clean water sources, and are therefore threatened by pollution of the groundwater, rivers and coastal ocean.

The main factors contributing to environmental degradation are as follows: 1) the scale and intensity of banana production; 2) the toxic nature of the wastes generated; 3) the emphasis on quality control; 4) the industry dominance of chemically-dependent Cavendish variety bananas; 5) the foreign and transnational power associated with the banana industry at the macro and industry levels; 5) First World interests in chemical usage with limited negative consequences; and 6) limited pressure for environmental sustainability.

This is supportive of sustainable development in that there is significant environmental degradation associated with banana production.

g) Power Dynamics Associated with Environmental Destruction

Both sustainable development and world systems theory propose that there are power dynamics associated with environmental destruction. Support for this

was presented in a number of areas. One of these was that there were significant interests supporting chemical usage and related practices which lead to environmental destruction, along with limited and fragmented support for sustainable development. This dynamic was actively pursued by the transnationals.

The transnationals were seen to be involved in the suppression of data relating to environmental issues, as well as the active prevention of obtaining or monitoring these types of data. They actively employed strategies to divert attention away from these issues, while presenting a public image of environmental responsibility and care. This was done in part through transnational support of so-called 'environmental protection measures' which do not fundamentally alter the fundamentals of banana production or of the chemicals used. These were also supported by First World interests tied to chemical usage. The transnationals also were seen to mobilize a great network of financial and political interests to protect their interests. This was seen with respect to DBCP, and the use of banned chemicals in Costa Rica after having been banned in their source countries.

These examples provide support to the sustainable development and world systems position that there is a significant power dynamic associated with environmental destruction caused by the banana industry.

h) Analytical Holism and Reductionism

Sustainable development argues that environmental and developmental processes, whether positive or negative, are the synergistic products of a wide variety of causes. Following from this, analytically reducing the complex of causes

to, for example, one sector or one level of analysis, contributes to environmental destruction because of the failure to adequately address the relevant causal agents and issues.

Ample evidence was seen in the banana industry of the interactions among various levels of analysis and among the broad range of issues.

With respect to interactions among the different levels of analysis, plantation dynamics were greatly affected by the international banana industry and of the broader political-economy. This was seen with respect to 'the Banana Blunder' and the banana wars associated with the transnationals and with the negotiations with the E.U.. In addition, the following examples of the micro consequences of macro features of the banana industry were examined: 1) transnational power on the plantation; 2) quality control; 3) worker exploitation and questionable management practices; 4) chemical exposure; 5) environmental degradation; and 6) underdevelopment and marginalization.

With respect to interactions in the broad range of relevant issues, numerous examples were examined where socio-cultural, political-economic and environmental factors contributed to a particular event or outcome. For example, environmental degradation associated with banana production was shown to be caused and supported by a wide variety of factors. Focusing on a very narrow range of these causal factors has been one of the strategies of the transnationals for diverting attention away from many of the causes of environmental degradation which would threaten their profitability. This was seen with respect to the ISO and

ECO-OK/Better Banana certification programmes, for example. This analytical reductionism has contributed to environmental degradation and to the failure to address the fundamental causes of environmental degradation, including chemical usage and the implications of mass-produced, monocropped, cloned bananas.

The interactions of numerous socio-cultural, political-economic and environmental factors were also shown to be crucial in terms of understanding the causes of exploitation, underdevelopment and marginalization associated with banana industry.

These support the argument that the activities in the Costa Rican banana industry cannot be reduced to factors of economic growth or an expression of power, and so consideration should be given to the contribution of environmental factors and sustainable development in addressing the issues of development.

3. Conclusion

In sum, significant evidence was found to support a world systems perspective of the Costa Rican banana industry. In addition, this study undertakes a broad-based examination of the banana industry that aims to respond to recent concerns with environmental destruction and the 'greening' of the banana industry. As a result, this dissertation calls for more explicit consideration of the importance of a model of sustainable development (as distinct from sustainable growth). It has been argued that modernization and world systems theory are reductionistic in that that they are not sufficient to account for the complex of activities associated with banana production and, further, that industrialization is a primary source of

environmental destruction. Since this position has been supported with significant evidence, then serious consideration must be given to inclusion of environmental factors in future work on development. In addition, the serious consideration of sustainable development perspectives requires the evaluation of the very real possibility that a banana industry based on mass production for export, chemical dependence, and profit is incompatible with environmental sustainability.

The banana industry continues to play an important role in the development of Costa Rica. The findings of the current study indicate that effective resolution of the many problems associated with the Costa Rican banana industry should be based on an appreciation of the complexity of the banana industry, as seen through the many interactions among different aspects of the industry, and different levels of analysis. Specifically, effective approaches to change in the banana industry are likely to be multi-faceted in nature (addressing political-economic, socio-cultural, and environmental issues), and are likely to encompass more than one of the following approaches:

1) changes in the organization and techniques of production at the plantation level;

2) national governmental and industry regulatory changes;

3) international legal and industry regulatory changes;

4) consumer pressures;

5) social activist and social movement pressures at the local, national and international levels.

In this way, the findings of the current study represent an important contribution to the understanding of the Costa Rican banana industry, and also provide the basis for the creation of appropriate policy with respect to the Costa Rican banana industry and development.

## Appendix 1: Methodology

Research for this project was carried out in Costa Rica from December 1995 to August 1996 using the following methods: 1) fieldwork on plantations; 2) a worker survey; 3) archival research; and 4) semi-structured interviews. During the fieldwork period I was based in the capital, San José, in order to take best advantage of primary archival, organizational, corporate, and governmental resources. This was complemented with field days on various plantations and at other sites located in banana production regions.

### Fieldwork on Plantations

My primary source of field data on plantations came from my case study plantation at finca Calarcá. In addition, I visited plantations at EARTH, and in the regions of Puerto Viejo de Sarapiquí and Talamanca. I also visited the organic banana plantation of Ecos del Agro, owned by Oscar Cruz. All of these plantations are located in the Atlantic zone. In addition, I traveled extensively in the Bocas del Toro region on both sides of the Costa Rican-Panamanian border.

I had originally intended to do a more comparative study of transnational and independent plantations. However, upon arrival in Costa Rica I discovered that the transnational plantations were not particularly accessible to researchers. As discussed earlier, this was largely because previous researchers had been critical of the transnationals and managers of transnationals were wary of foreign researchers and protective of their corporate image. Nevertheless, though numerous

discussions with individuals in the industry and with limited visits to transnational plantations I learned that the production techniques were highly standardized, and varied little among plantations. This is due to the near universal application of scientific research into banana production techniques, largely because transnationals require these production techniques of their independent suppliers.

Finca Calarcá was selected as a case-study plantation because of an indirect social contact with the son of one of the plantation co-owners. This is clearly not a random sample. However, every indication is that Calarcá is representative of most independent plantations in the Atlantic zone. Further, it is the norm in Costa Rica that introductions occur through social networks, however loosely defined, and therefore this distant social connection with the plantation co-owner was not perceived as unusual or negative in any way.

Much of the fieldwork at finca Calarcá was inductive and qualitative. My primary objective was to better understand banana production, broadly defined, and all of the issues relevant to finca Calarcá. My daily research agenda was therefore dictated by whatever was salient at the plantation on that given day. I also attempted to maintain good conversational ties with all of the different types of workers, including packing-plant workers (both men and women), field supervisors, office workers, management, and to a lesser degree field workers. I spent time in almost all areas of the plantation, and was eventually included in most plantation activities. This included worker lunch conversations, management and supervisory meetings, and meetings with Dole and other representatives. In addition, I gained

the confidence of a handful of workers (including management, clerical and packing-plant workers), each with whom I was able to have more in-depth conversations. I consider it a sign of successful field research that throughout the fieldwork period good relationships were maintained with all levels of workers.

At Calarcá there were both advantages and disadvantages of being a white, North American woman. Clearly, it was very unusual for a 'gringa' to be at the plantation. Even after explaining that I was doing research on the banana industry, it was still unclear to many individuals as to why anyone would want to know anything about banana production. This seemed to be satisfied by the explanation that most North Americans have no idea about the issues that lie behind their consumption of bananas; no idea about all what they, the workers, put into banana production. Once this explanation was established and workers became accustomed to my presence at the plantation, I had little difficulty at the plantation. In the end, I believe that it was so unusual for a gringa to be at the plantation that it was no more unusual for me to speak to management than to walk in the fields or to have lunch in the plantation cafeteria.

Even though the accessibility to various aspects of the plantation and my rapport with various types of workers was very good, there were several minor limitations. These were most pronounced with respect to the field workers, with whom I found it difficult to establish good rapport. Several factors contributed to this. First, the field workers, by definition, spent most of their time in the fields working alone or with several other field workers. They spent little time at the

packing plant or at the cafeteria where I would have had easier contact with them. Second, many of the field workers spoke with the slang and accents common in rural Costa Rica and also Nicaragua, which I found difficult to understand. Finally, because of the isolated nature of the fields and the solitary nature of the work in the banana fields, I didn't feel comfortable walking in the fields by myself. I was therefore limited in going in the fields to times when I could go with one of the field supervisors, all of whom I had established good rapport. I was unable to establish good enough rapport with any of the field workers sufficient to feel comfortable accompanying him or his work team in the fields.

Another limitation was that I didn't regularly visit the company housing on the plantation. This is because I felt that in contrast to the rest of the plantation, this space was workers' private space and I didn't feel comfortable invading it. Also, it was almost exclusively inhabited by field workers, with whom I was unable to establish a good rapport. It is quite possible that a male researcher could have had more comfortable access to the housing and therefore to the field workers.

Worker Survey

In order to gain a better understanding of the workers, a worker survey was completed on worker and household demographics, migration and mobility within the banana industry. The survey was completed with the help of a research assistant. This was beneficial because the assistant had easy access to the workers, and had the workers' confidence. She was also familiar with the accents, jargon and slang in common usage. This was essential since many of the field workers were

from rural Nicaragua and had accents substantially different from those in Costa Rica, with which I was familiar. The assistant was trained in the administration of the survey, well as in basic research skills.

A pre-test of 10 questionnaires was completed by myself and the research assistant, after which the questionnaire was modified slightly. The questionnaires were administered orally by myself or the research assistant. Some of the questions were open-ended and others were multiple choice. During the administration of the survey by the research assistant, I reviewed questionnaires on an ongoing basis. During the survey period Calarcá employed approximately 140 workers, of which 112 were included in the survey. The remaining individuals were excluded either because they refused to participate (5 individuals), or because the assistant was unable to locate them during the survey period.

Below is a list of the variables addressed by the questionnaire, and a copy of the survey is provided at the end of this appendix.

Job-Related Questions

- tasks done regularly at Calarcá
- how long worked at Calarcá?
- how many other plantations have you worked at?
- how many years worked on banana plantations?
- tasks/jobs completed other than those at Calarcá?
- how important were the following reasons for leaving last plantation job?: location, difficulty or type of work, worker/supervisor relations, other
- did you know someone at Calarcá who helped you get work here?
- do you have family members who work at Calarcá?

Household Demographics

- married/common-law, previously?
- how many children? live with you, with mother/father of child, left home
- sex, age
- years of education
- number of siblings
- own, rent housing, company housing
- do you own land, have a garden, fruit trees, animals?
- how many in household (who eat and sleep under same roof)?
- other than primary jobs, other sources of income

Migration: by country/province/canton/district

Respondent

- at birth where did parents (mother) live?
- residence now
- residence 2 years ago (1994)
- residence 5 years ago (1991)
- why did you move here?
- did move because of work (to find/offered)?

For each other household member:

- relation to respondent, sex, age, education,
- at birth where did parents (mother) live?
- residence 5 years ago (1991)
- did move because of work (to find/offered)?

Archival Research

Archival research was conducted on an ongoing basis throughout the fieldwork period using the resources of the following organizations: CORBANA (Corporación Bananera Nacional), CATIE (Centro Agronómico Tropical de Investigación y Enseñanza), EARTH (Escuela de Agricultura de la Región Tropical Húmeda), La Biblioteca Nacional, Archives of La Nación (national newspaper), IICA (Instituto Internacional para la Cooperación Agrária), the National Archives, and La Selva biological research station.

Semi-Structured Interviews

I completed semi-structured interviews from May to August 1996. The interviews were scheduled later during the fieldwork period for two main reasons. First, I wanted to ensure that I was sufficiently proficient in Spanish, and specifically with the vocabulary associated with banana production. Second, I felt it important to have spent several months at Calarcá before undertaking interviews in order that I have a good understanding of the specifics of banana production, of the social organization of production and of the issues surrounding banana production in Costa Rica. Finally, because the network of social interactions among individuals in the banana industry is rather dense, I wanted a good understanding of the formal and informal organizational relationships before engaging any specific individual. The interviews were semi-structured, but interviewees responded with great breadth and enthusiasm. Most interviews lasted longer than one hour, and with few exceptions the interviews were recorded and later transcribed.

I originally thought that being a white, North American woman ('gringa') in Costa Rica might present numerous limitations as a researcher, especially on the plantation and with corporate executives. In practice, the few obstacles that arose from this were outweighed by its advantages. In some interviews with executives, for example, I believe that my appearance as a 'gringa' contributed to a paternalistic ambiance where the interviewee would explain to the 'naïve gringa' exactly how things worked in the banana industry (e.g.: "vea clara ..."). My research objectives were always stated explicitly and I always received permission to record interviews.

Interviews were completed with the following individuals:

1. Ana Cecilia Vega V., Manager in commercial negotiations at the Ministry of Agriculture and Livestock (MAG); individual had completed MBA thesis on the Costa Rican banana industry.
2. Martin Zuñiga, Director of Banana Industry Policy and Statistics at the Corporación Bananera Nacional (CORBANA).
3. Carlos Acevedo, Manager of Social and Environmental Issues at Standard Fruit Co.; member of the social and environmental committee.
4. Roberto Castillo, Ex-union leader and negotiator; quality control manager, finca Calarcá, primary informant for Philippe Bourgois.
5. Luís Umaña Aguiar, General Director of the Asociación Nacional de Productores de Banano (ANAPROBAN).
6. Carlos Vega, Tropical Environmental Coordinator, Chiquita Brands International.
7. Oscar Cruz, President of Ecos del Agro S.A.- Organic Bananas and Plantains.
8. Alvaro Monge, Manager in the Department of International Trade Negotiations, Ministry of Foreign Trade (COMEX).
9. Alejandro Bejarano, Director de la Cámara Nacional de Bananeros, member of the social and environmental committee.
10. Don Héctor Sánchez, Managing Co-owner of Bangoshen S.A., finca Calarcá.
11. Don Jaime Viana, Administrator of finca Calarcá.
12. Padre Solano, Escuela Social Juan XXIII.

13. Federico Odio, Director of Difrusa, marketing company.
14. Leonardo Mata, Epidemiologist at the University of Costa Rica.
15. Rolando Castro Arce, Red Cross worker in Bataan.
16. Ramiro Jaramillo, regional coordinator for the regional network for Latin America and the Caribbean (LACNET) of INIBAP
17. Thierry Liscot of CATIE (Centro Agronómico Tropical de Investigación y Enseñanza
18. Jorge Garrita, Manager at Instituto de Desarrollo Agrario (Agrarian Development Institute).

1. Nombre _____ 2. Trabajo principal **(1)**: _____

3. Otros trabajos (con regularidad) **(2)**: _____

4. Cuánto tiempo ha trabajado a Calarcá? **años** _____ **meses** _____

5. Ha trabajado en otras fincas que Calarcá? Cuántas en total, incluyendo Calarcá? ___ **(Si es 1, pase al número 9)**

6. Incluyendo Calarcá, cuánto tiempo ha trabajado en banano? **años** _____ **meses** _____

7. Cuáles trabajos ha hecho en banano, otro que los que hace a Calarcá?

_____

8. **a)** Cuando dejó su último empleo de banano, cuál fue la importancia de dinero en su decisión de dejarlo?
Fue: **1.** muy importante **2.** importante **3.** poco importante **4.** no fue importante

**b)** Cuál fue la importancia de la ubicación de la finca en su decisión de dejarlo? Fue: **1 2 3 4**

**c)** Cuál fue la importancia de la dificultad o el tipo de trabajo en su decisión de dejarlo? Fue: **1 2 3 4**

**d)** Cuál fue la importancia de las relaciones con capataces u otros trabajadores en su decisión de dejarlo? **1 2 3 4**

**e)** Habían otros factores que fueron importantes en su decisión de dejar su empleo? **(2) S N**

_____

9. Está casado/a o ajuntado/a? **S N** 10. Antes, estaba casado/a o ajuntado/a? **S N** Cuántas veces? _____

11. Hay miembros de su familia (o la familia de su esposo/a) que trabajan a Calarcá? **S N**

1) nombre:_____ **1.** empacadora **2.** campo **3.** otro **Relación**:_____
**Vive con Ud.? S N**

2) nombre:_____ **1.** empacadora **2.** campo **3.** otro **Relación**:_____
**Vive con Ud.? S N**

12. Había alguién que conocía que le ayudó para conseguir su empleo a Calarcá? **S N**

**a)** Quién? nombre: _____ **1.** empacadora **2.** campo **3.** otro

**b)** Cómo le conocía? **(No digas las opciones) 1.** es amigo/socio? **2.** de trabajo? **3.** es familia? **4.** hay amigo en común? **5.** otro _____

13. Cuántos niños tiene incluyendo todos que están vivos y muertos? _____ **a)** Cuántos viven con Ud.?_____

**b)** Cuántos viven con la madre/el padre del hijo? _____ **c)** Cuántos han salido de la casa? _____

14. Sexo **M F** 17. Edad ___ 15. Años en escuela y/o colegio _____ 16. Cuántos hermanos tiene? ____

| **Cuando nació, dónde vivían sus padres (la madre)?** | **Residencia Ahora país, prov. /canton/distr.** | **Residencia hace 2 años (1994)** | **Residencia hace 5 años (1991: terremoto, eclipse)** |
|---|---|---|---|
| 1. /__/___/___ | /__/___/___ | /__/___/___ | /__/___/___ |

**(Si hace 5 años es diferente de ahora) 17. Por qué razón vino aquí? (no digas opciones) 1.** para buscar trabajo

**2.** porque un empleo fue ofrecido a Ud. **3.** para estar con familia **4.** otro _____

18. Donde vive ahora,: **1.** es su propia casa? **2.** es aquilada? **3.** es de su familia? **4.** es en los baches?

19. Tiene terreno? **S N** 20. Tiene jardín o frutales? **S N** 21. Tiene animales? (no incl. animales de casa) **S N**

22. Además de sus empleos principales, hay otras cosas que su familia hace para ganar dinero? **S N**

**(Quién y qué)** 1)_____ 2) _____

23. Cuántas personas viven en su hogar, incluyendo Ud.? (que comen y duermen bajo el mismo techo) ___

| Relación | Sexo M/F | Edad años | Educ años | Cuando nació, dónde vivían los padres (la madre)? | Residencia hace 5 años (1991) | Mudó para trabajar?* |
|---|---|---|---|---|---|---|
| 2. | | | | /__/___/___ | /__/___/___ | |
| 3. | | | | /__/___/___ | /__/___/___ | |
| 4. | | | | /__/___/___ | /__/___/___ | |
| 5. | | | | /__/___/___ | /__/___/___ | |
| 6. | | | | /__/___/___ | /__/___/___ | |
| 7. | | | | /__/___/___ | /__/___/___ | |
| 8. | | | | /__/___/___ | /__/___/___ | |

*** Mudó a este lugar para trabajar? 1: para buscar trabajo; 2: un empleo le fue ofrecido a él (ella)**

## Appendix 2: Introduction to Calarcá:

## The Physical Plantation and the Social Organization of Production

Finca Calarcá is located in the Atlantic zone of Costa Rica, about 30 km inland from the port city of Limón, and 10 minutes drive down a bumpy dirt road from Bataan, the closest town. It is owned by four Colombians who also own plantations in Colombia, but who decided that Costa Rica provided a hospitable context for expanding their banana plantation holdings. They, like many Latin Americans, were looking to increase production in anticipation of increased access to Europe with the creation of the E.U.. All of the owners continue to live in Colombia, but finca Calarcá is overseen by the managing owner, don Héctor, who comes to Costa Rica from Colombia for one week every month.

Although he admits that his experience isn't universal among the Colombian banana producers who have come to Costa Rica, don Héctor is favourable about his experience with banana production in Costa Rica. In part, this is because the banana industry plays such a strong role in the Costa Rican economy and therefore has a lot of influence and is well-supported by the government. In addition, the transnationals also provide stability to the business. Don Héctor also credits his network of contacts and associates with whom he works well. In addition, don Héctor likes coming to his Costa Rican plantation as opposed to his Colombia plantations because in Costa Rica he can be a hands-on manager, whereas in Colombia there are security problems with workers who are like "armed guerrillas" on the plantations and so he can't be directly involved in the production processes.

He says that in Colombia he is a manager on paper only and that in the past four years he has been unable to visit his plantations. At Calarcá, he can walk the fields, talk to workers, and doesn't have to worry for his safety when it gets dark.

Finca Calarcá is an independent plantation which has been in production since 1992. The approximately 200 hectares of land were chosen by the plantation's administrator, don Jaime. Don Jaime is also Colombian, and was hired by don Héctor on the recommendation of another Colombian plantation owner in Costa Rica, who was an acquaintance of don Héctor. Apparently, don Jaime, who now is largely responsible for the plantation, was initially paid very little until he had proved his worth to the company. The land was fairly inexpensive because they are of somewhat marginal quality, with clay soil and poor drainage. This movement into marginal banana lands was a fairly common phenomenon in order to achieve massive increases in banana production in anticipation of increased access to the E.U. market.

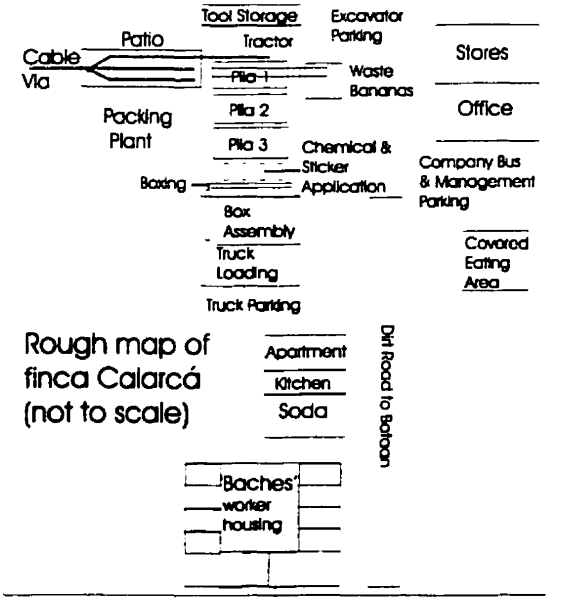
Originally finca Calarcá was a supplier to Uniban, and then to Chiquita, but after a series of price drops associated with market oversupply associated with the E.U. banana accord, Calarcá managed to secure a long-term supply contract with Standard Fruit (Dole) in 1996. Calarcá has a very high level of quality and also productivity, ranking fifth of all of Dole's independent suppliers in 1996.

The Physical Plantation

Calarcá has its administrative office in Bataan, which also houses a small apartment where don Héctor stays when he is in Bataan. The office is located in

Bataan because there is no phone service at the plantation, and communication occurs between the plantation office and the Bataan office via CB radio.

As can be seen from the rough map below, the plantation infrastructure includes five structures. The first, and most significant structure is the packing plant, where all of the processing of the bananas took place. The second structure is the office building, which is used by don Jaime, the plantation's administrator, by John Freddy, the administrative officer, and peripherally by Balto, the field manager. The stockroom, managed by Roy, was located in the back half of the office building, and is used for storage of all materials used in production, including chemicals, rope, plastic bags, and stickers. The third structure is a covered eating area, where workers eat their lunch and take their breaks. The fourth structure is the worker cafeteria, called the 'soda'. The soda building also has a kitchen for meal preparation, and a small apartment for the family that runs the soda. The fifth structure is the worker housing. Small individual rooms, each with a single bed, a window, an electric plug, and a bare- bulb ceiling light, surround a paved basketball court. They are referred to collectively as the 'baches' (derived from the English 'bachelor's quarters'), and each room is approximately eight by ten feet.



The physical structures of the plantation are surrounded on all sides with fields of banana plants. The 200 hectares of fields are divided into sections by a series of primary and secondary drainage canals, which serve to lower the water table to keep the roots of the banana plants from rotting. The fields are also sectioned by the 'cable via', which is an aerial cable that crosses the plantation and is used to transport bananas back to the packing plant, which is roughly in the center of the fields.

## The Social Organization of Production

### Upper Management

At Calarcá, this consists of the plantation owners, of don Héctor, the managing owner, of don Jaime, the plantation administrator, and of Balto, the field manager. Of these, don Jaime, the administrator, clearly has the most power. Don Jaime, simply put, is responsible for the plantation. He spends virtually every day at the plantation, in the fields or in the packing plant. Many people referred to Calarcá as being don Jaime's plantation, and to a large degree the success of Calarcá was attributed to don Jaime's expertise, skill, and business management. Don Héctor, travels from Colombia one week per month. Although he said he likes to be involved in the production processes, in fact, don Héctor is more involved in strategic long-term issues, in keeping don Jaime in check, and also in financial matters. Balto, the field manager, is responsible for the four field supervisors, and for quality control of production processes in the field. Although he has a fair degree of autonomy, Balto reports to don Jaime. By and large, decisions are made at

this level were through mutual adjustment, through informal conversations and discussions over the issues at hand.

Middle Management

At Calarcá, this consists of the field supervisors and the packing plant supervisor. The packing plant supervisor is responsible for the approximately forty packing plant workers. In addition to the packing plant supervisor, there are three field supervisors, each of which supervised a block of fields. They are Francisco, Miguel, and Luís. Luís quit Calarcá not long after I arrived at Calarcá, and for quite a while his block was split among the other two supervisors, and Balto. Eventually, Florencio was moved from the packing plant to replace Luís in the fields. This did not last long for Florencio was fired shortly after, reportedly for drinking alcohol in the fields. The field supervisors are responsible for between 35 and 45 field workers whose work comprise all of the field maintenance, care of the banana plants and the harvesting of the bananas. In addition, the field supervisors' are each responsible for the maintenance and quality control for over 50 hectares of banana fields.

Quality Control and Data Management

Standardization and quality control are critical aspects of banana production, and therefore there are several people whose jobs are specifically oriented towards these goals. These are John Freddy, who runs the plantation office, Ivan, the patio supervisor, Roberto, the quality control manager, and to a lesser degree, Roy, who is in charge of the stockroom.

Front Line Workers

At Calarcá this includes approximately 100 workers, divided between the field workers and the packing plant workers. The field workers are responsible for all of the tasks necessary for the maintenance of the banana plants, and for the cutting of the bananas and transporting them to the packing plant. In the packing plant, workers remove the bananas from the stalks, cut them into bunches, and after several selection procedures, pack them into boxes and onto the trucks for transportation to the port.

Support Staff

The support staff consists of specialized units which provide support to the organization outside its operating work flow. At Calarcá this consists primarily of four different functions. Ana is the office manager who runs the Bataan office. She completes all of the administrative, financial, and human relations functions of the company. She has a large degree of autonomy over her work, and her contribution to the company is well recognized both by don Jaime, the plantation administrator, and don Héctor, the managing owner. Tio is responsible for tool and tractor maintenance, as well as general repairs to the infrastructure of the plantation. Lisandro is in charge of vehicle maintenance and is the driver for the company pickup truck and employee bus. The bus is used to drive workers to and from the plantation, for the company soccer team to go to games in neighbouring towns, and for occasional employee outings to the beach. In addition, there is the cafeteria, known as the 'soda'. It is run by doña Vera and her daughter Xinia. To a lesser extent, doña Vera's husband, Roberto, the quality control manager, and another of

their daughters, Ingrid, also work in the soda. Although the family also has a house in Bataan, to a large extent they live in the small apartment attached to the soda.

## Appendix 3: Expanded Plantation and Production Processes

### Production Processes

At Calarcá, the work week varied depends on the position. At the upper management level, don Jaime and Balto work a five-day work week, and don Héctor comes from Colombia one week per month. Those in administrative positions, Ana in the Bataan office, and John Freddy at the plantation office, also work a five-day work week. Tio, who does maintenance and repairs also works a five-day week. Roy in the stockroom, and Lisandro, the driver, also work five days a week. The field workers and their supervisors work a six-day work week, although Saturday is often a short work day. The workers who live in the baches eat their meals at the soda, and therefore doña Vera and Xinia in the soda work seven days a week. The packing plant workers, the patio and packing plant supervisors, and the quality control manager only work when there is a cutting order from Dole, its buyer. This varies from three to six days per week, and if only one truck is to be loaded, then less than a full day's work is required. Normally, cutting orders are received for four or five days per week, often with two trucks to be filled on one day.

#### Non-Cutting Days

On non-cutting days, the packing plant workers do not work, but workers required to support and supervise the field workers work, and from Monday to Friday, John Freddy in the plantation office and Ana in the Bataan office work.

On non-cutting days, the field workers complete all the tasks required for plantation maintenance. This consists of a number of different tasks, each of which

is completed by individual or teams of field workers. Usually, a field worker completes only one of these tasks as his primary job, but occasionally tasks are combined, or a worker is responsible for more than one task on different days. Workers are paid a varying amount depending on the task per hectare. As described earlier, the plantation is divided into four blocks, but then further divided by drainage canals and the cable via, thus providing the basis for the calculation of hectares completed. The tasks are rotated among the various sections of the plantation in order to ensure standardized production techniques for the entire plantation.

One of the most important tasks in the field is the selection and elimination of the daughter plants. Banana plants reproduce by cloning and therefore several new daughter plants appear at the base of every mother plant. However, not all of these daughter plants will be allowed to grow to maturity, and only one is selected. The others are destroyed. This increases the quality of the fruit of the daughter plant and avoids over-crowding. Selecting the best daughter plant is done based on the health of the plant, its location to the mother plant and its fruit, and its location relative to adjacent plants. This requires a fair degree of experience and expertise. It also, as Balto, the field manager explains, represents the "future of the plantation", and if this task is completed improperly, the plantation could be ruined within a year. For these reasons, only the most experienced and trusted field workers complete this task. The selected daughter plants are often tied with rope so as to

maintain an adequate distance from the mother plant. This ensures proper growth of the daughter plant, as well as proper fruit growth of the mother plant.

Several weeks after the fruit appears on the plant, the bananas are covered with a blue plastic bag, which is impregnated with insecticide. In addition to its chemical attributes, the bags also regulate the temperature of the fruit, and decrease its exposure to direct sunlight. Before the bags are applied, the incomplete bunches of bananas or 'false hands' are removed from the bottom of the stalk. In addition, at Calarcá, three complete or 'true hands' are removed. This serves to increase the grade of the remaining hands. If, after the removal of three true hands, less than six hands remain on the stalk, the entire plant is cut and destroyed. This is because the plant would likely be below grade and have few hands, thus wasting labour, chemicals, bags, and land. Before the bags can be applied, the flower must be removed, and these are brought to the stockroom by the field worker as proof of bagging.

As the fruit grows larger and heavier, teams of four field workers secure the banana plants using rope. This is necessary because Giant Cavendish bananas have been genetically engineered to maximize the size and quantity of bananas on each plant, to the degree that the plant is vulnerable to wind damage because of the weight of the fruit. The plants are attached with rope to each other or to wooden stakes in the ground.

Another task is to apply pesticides, herbicides and fertilizer to the banana plants. The bags of chemicals are obtained from Roy in the stockroom and then

transported to the field on the cable via. The cable via is a steel cable on which rollers with hooks are placed, allowing a worker to pull heavy bags of chemicals into the field, or conversely, bananas into the packing plant. In the field, individual field workers would apply chemicals to the plants.

The soil at Calarcá is not very sandy, and this greatly influences its production techniques. As a positive, because drainage is poor, the chemicals and fertilizers remain longer in the soil. However, poor drainage causes the roots of banana plants to rot, and also increases the plants' susceptibility to sigatoka disease. As a result, a network of drainage canals was dug throughout the plantation, which serves to lower the water table.

The canals are dug on an ongoing basis using several small excavators. They must be small in order to fit between the rows of banana plants. However, because the soil has a lot of clay in it, its weight poses mechanical difficulties for the smaller excavators, and results in high maintenance costs and a large amount of down-time for the excavators. As a result, don Jaime, the plantation administrator ordered an excavator which is larger than is normally used for banana production. Although this represented a large capital expense, don Jaime felt it necessary in order to keep the production levels and quality of the bananas high. These represent some of the hidden costs of having purchased marginal plantation lands, which was a frequent practice during the rapid expansion in Costa Rica during in the late 1980s and early 1990s.

If the drainage canals do not lower the water table enough, it results in yellowing plants and under-developed bananas. At these times, Balto, the field manager, or don Jaime, the administrator, would order that another canal be dug. According to Balto, the larger banana companies [almost all of which are transnationals] hire engineers to survey and calculate how high the water table is, but on smaller plantations, such as Calarcá, this is done through experience, by understanding the soil type, by keeping a watchful eye, and finally by trial and error.

Calarcá's poor drainage results in a higher degree of yellow leaves and of sigatoka disease. Both of these require that the diseased leaves be removed. This is especially critical in order to control sigatoka disease, which infects the leaves, but whose spores transmit through the wind. Leaf removal is done using a long (around 8 ft.) pole with a machete blade at one end. As mentioned previously, field workers are paid by the hectare. This led to one of the primary complaints of the field workers. That is, the high degree of yellowing and sigatoka disease results in higher amounts of field maintenance. However, the workers complain that the per hectare wage does not take into account the fact that the work is harder because of the poor quality of the soil and the resulting leaf damage.

Because of the poor soil drainage at Calarcá, sigatoka control measures are especially important, and the most important means of controlling sigatoka disease is aerial spraying. This is done by Dole, every two weeks.

One of the primary means of standardization of field techniques is to colour code the plants based on age. When the fruit first appears on a plant, a coloured plastic ribbon is tied to the plant, corresponding to the week. The ribbons are used to standardize the various field tasks. Eight different colours are used. For example, in a given week, new plants might be tied with red ribbons, plastic bags applied to plants with blue ribbons, and plants with brown ribbons would be harvested. The following week, the colours would be rotated. This ensures the standardization of all the production techniques for each banana plant. In the stockroom, Roy keeps close track of the flow of plastic bags and ribbons and of the tasks completed in each field block. Workers report to Roy the numbers of the fields completed with a task by writing the numbers on immature or deformed bananas, and by delivering the flowers, empty chemical sacks, or remaining ribbons, rope or plastic bags. This system of reporting serves as an indication that the tasks were completed, and also of standardization. Roy also compiles these numbers so that John Freddy, in the plantation office, can make predictions about the plantation's productive capacity for any given week.

Francisco and Manuel, and for a short time, Florencio, the field supervisors, walk through their blocks of fields to supervise their 20-30 workers. When a supervisor comes across his workers, he verifies his work and gives him feedback. He also double checks who is completing what task on which fields at any given time. As the field supervisor walks through the fields, he is constantly correcting tasks that were overlooked or completed poorly, by re-tying a rope, cutting a leaf,

adjusting a bag, or whatever is needed. Rarely is there any direct confrontation between a field supervisor and his workers about work quality, although as will be discussed further in a later section, this is an ongoing issue. The field supervisors also meet with each other and/or with Balto, the field manager, from time to time during the day to report on the work progress, to consult, or compare notes on conditions of the fields or the workers. Balto, the field manager, completes many of the same tasks as the field supervisors. In addition, he consults with and reports to don Jaime on the status of the plantation.

One of the tasks that the field supervisors and Balto complete together is population control. At issue is the density and distribution of plants throughout the plantation. This, like virtually every task associated with banana production, is an industry-wide standardized process. A 7.89 metre rope is revolved around a stake and the number of plants inside this circle is counted, and decisions are made about the placement of existing plants.

In general, the field workers and supervisors take their meal and coffee breaks in the soda. In part, this is because all of the workers who live in the 'baches', the plantation housing, are field workers, and they eat all of their meals at the soda. In the morning, most of the field workers eat the Costa Rican national breakfast of 'gallo pinto' [rice and black beans; literally: spotted rooster], with eggs, and coffee with sugar or sweetened condensed milk from a can. A mid-morning coffee is also common. The set lunch usually consists of rice, black beans, some form of meat, and boiled green bananas. In the afternoon, workers often come in to have a cold pop,

which is poured into a plastic bag because of the deposit on the glass bottles, and is taken back with worker into the fields. Payment to the soda is by meal token, paycheque deduction or cash. Many of the field workers, and especially those who live in the 'baches' own bicycles, which they use to get between the packing plant and the soda, or occasionally to ride into Bataan. The field workers often watch television in the soda, or play dominoes or cards. The field supervisors usually eat their lunch at the soda, but the managers of the strategic apex, Balto, don Jaime, and don Héctor do not usually eat their meals at the soda, preferring to eat in Bataan. Nevertheless, their presence there for coffee or an occasional meal is not unusual, but like the field supervisors, they do not socialize or remain long in the soda.

Cutting Days

Calarcá receives cutting orders from Dole, their buyer and marketing company. On those days, bananas are cut and the packing plant workers are called in to work. Usually the cutting orders are known up to a week in advance, and thus the packing plant workers can anticipate their work schedule for the following week. The order specifies the ship name, the destination of the shipment, and the time that the order must be received at the port. The cutting order also specifies whether the boxes are to be packed directly into the truck, or on palettes. The destination of the shipment, in the case of Calarcá, to Germany, the U.S., or Russia, determines the length of shipping time to reach its market, and therefore the maturity, or ripeness, of the bananas to be cut. This is explicitly stated on the order in terms of how many weeks old the bananas may be, as determined by the colour of

its ribbon. The cutting order will also specify the acceptable range of grade the bananas, expressed in millimetres. The destination also determines the types of chemicals to be applied to the bananas before being boxed, and this is also on the cutting order. The cutting order will also include packing instructions, which vary by destination.

On cutting days, Lisandro, the driver drives the bus through the surrounding communities to pick up the packing plant and field workers and bring them to the plantation. On these days, work usually starts at 5:00 a.m.. This is advantageous because it is slightly cooler in the early mornings than in the afternoons. Work continues through the morning, with exception of a 15 minute break, when most workers from the packing plant relax in the covered eating area adjacent to the packing plant. The few workers with bicycles at the plantation ride them to the soda for a coffee or a cold drink. After 15 minutes, Florencio, the packing plant supervisor or Roberto, the quality control manager, hits a metal pipe (referred to as la papota [the big potato]) to call the workers back to work. Lunch break is at 11:30 for thirty minutes. Almost all packing plant workers bring their lunch from home, which they eat in the covered eating area. The most common lunch is chicken or beef stew in a thermos and a bottle of fruit juice, often with oatmeal dissolved in it. Most field workers buy their lunch at the soda. In part, this is because many of them live in company housing (the baches), but it is also because the flexibility of their work allows them the time to get to the soda at lunch time. By contrast, most packing plant workers don't want to take just over ten minutes of their half-hour to

walk to and from the soda. If a second truck is to be loaded in the afternoon, a second break is given, during which workers generally relax in the eating area, or bike to the soda (often with a passenger) to buy a cold drink or a coffee. After 15 minutes, the papota rings the workers back to the packing plant.

Many of the field tasks described above are also completed on cutting days, but a large portion of the field workers switch tasks to be part of cutting teams on cutting days. The cutting teams consist of four field workers.

The cutting team finds the stalks marked with the coloured ribbon indicating that it is of the proper maturity. At the time of harvesting, the bananas are not ripe, but are emerald green in colour. Before cutting the stalk, a field worker calibrates the bananas to ensure that the middle banana on the second hand of the stalk of the proper grade as specified on the order. If it is not, the stalk is left to be cut the following week. A pole is placed under the stalk to support it. Then foam pads are placed between the hands of bananas in order to prevent them from damaging each other. A large piece of foam is placed on one worker's shoulder where he catches the stalk as another worker cuts it with a large machete. The stalk, weighing between 35 and 40 kg., is carried to the cable via, and hung on a hook with a loop of rope. In doing so, the worker leans far over backward in order to prevent the stalk from swinging or from cosmetic damage. Meanwhile, the mother plant is cut into large pieces, moved away from drainage canals, and left to rot. When 15 to 20 stalks have been loaded onto the cable via, one of the workers pulls the 'train' of stalks to

the packing plant. The division of the cutting tasks is standardized, and with few exceptions, the same worker always completes the same set of tasks.

The 'train' of stalks is pulled onto the patio, which can hold multiple trains due to a series of switches. On the patio, Jesús removes the chemical-impregnated plastic bags from the stalks and bundles them by hand. He uses no gloves or any type of protection from the chemicals of the bags. The bundles of bags are stored in an open area, and then periodically taken to a recycling plant in a nearby town.

Ivan, the patio supervisor, compiles data about the stalks. This includes the number of stalks, the number of hands per stalk, the grade, as well as tallying the different types of defects and maltreatment of the bananas. These include leaf damage, damaged caused by another hand of bananas, disease, latex staining, chemical burns, knife cuts, bruising, and rarely, genetic defects.

Of the defects, bruising, chemical burns, knife cuts, and to some extent, damage from adjacent hands are related to maltreatment by field workers, and therefore great care is desirable in order to increase fruit quality. Therefore, a performance rating of the cutting team is also calculated and expressed in a percentage. The percentages are displayed on a white board in the patio. Balto, the field manager, likes those percentages to be as high as possible. The field supervisors like the percentages to be at 93%, or above. According to the field workers, they are careful with their work until they reach 92%, but do not work to achieve higher than that. The data from the patio is compiled and given to John Freddy in the plantation office for further processing.

During my field period, Calarcá instituted a new field technique to decrease the damage by field workers during the cutting process. This was to replace the smaller pieces of foam used to prevent damage from adjacent hands with long (approx. 2 metres) foam strips that were wrapped around the stalk and tucked under each hand. The foam strips are colour-coded to indicate the cutting team. After instituting this practice, all of the cutting teams' quality percentages rose well above 93%. This pleased management and Dole, and in addition, the cutting teams found them easier to use, thereby making the technique viable.

At Calarcá, one worker brings the stalks, one at a time, from the patio into the packing plant on the cable via, and removes the metal pole that separates that stalk from the rest on the train. Then, the hands of bananas are taken from the stalks by one or two workers, who then place them in the first water tank, or 'pila'. Another worker removes the stalks from the cable via rollers, and returns the rollers to the patio to be available for the cutting teams. He then throws the stalks into a trailer which is pulled by tractor, which is driven and maintained by Mario. The stalks are carted to an unused area on the edge of the plantation, dumped, and left to rot. Mario informed me that the stalks rot quickly, and that the same location has been used for five years, yet there is no significant accumulation of stalks.

The hands of bananas are floated in water in order to wash the bananas and prevent latex, which oozes from the cut, from staining the fruit. This is critical because latex staining only becomes visible hours later, after they are already boxed. The latex also prevents the proper adhesion of fungicides and therefore increases the

risk of rot in the entire box of bananas. On the other side of the first pila, 7 or 8 workers, almost all of which were women, are responsible for quality control and cutting the hands into bunches. Although there are no chemicals in the water, the women's hands are constantly wet, and they wear no protective gear other than rubber aprons.

The packing plant supervisor is responsible for the approximately forty packing plant workers. This is done primarily through direct supervision. Above one of the pilas (washing tanks) is a catwalk, where Florencio, the packing plant supervisor during part of my field period, spends much of his time overseeing, literally, the work of the packing plant workers, almost all of whom are women.

From time to time Florencio yells at one of the women that she rejected a good bunch of bananas, or conversely, that she passed an under-standard bunch of bananas on. His management style is at best, impersonal, and at worst, abrasive. The packing plant atmosphere is far more tense when the Israel, the Dole quality control inspector is present. This occurs on approximately a quarter of all cutting days. Florencio's supervision is far more intense and condescending, as he attempts to demonstrate his control over the women of the packing plant to the Dole representative. The women usually ignore Florencio to a large degree, except when his supervision is perceived to be too extreme or over-postured. At these times the women roll their eyes and occasionally talk back to Florencio to leave them alone.

The women at the first pila reject any banana which has too many cosmetic defects, such as damage from latex in the field, from leaves, or from adjacent hands.

They also reject any banana that is too small, that has any ridges on the peel, or that has an improper curvature (either too much or too little). These rejected bananas are thrown onto a conveyer belt, which removes them from the packing plant and into a concrete pit for disposal. Approximately 20% of all bananas are rejected for these cosmetic reasons.

According to Ana, the high quality of bananas at Calarcá makes her job easier. She says that it's better to throw away questionable bananas and risk the supervisor, Florencio's criticism than to pass it along to the next pila and risk it coming back again. Florencio, often stands on the catwalk above the pila, verifying the women's work and chastising them for their errors. Ana is resentful of the disrespect she and the other women receive in the packing plant.

In addition to Florencio, the packing plant supervisor, on many cutting days the packing plant is also supervised by Israel, the Dole Representative. He ensures that all appropriate measures are in place in order that the packing order is met and that the quality of the bananas is as high as possible. As discussed earlier, Israel's presence has a noted effect on the working atmosphere of the packing plant, mostly because of Florencio's intensified management.

The waste bananas are usually channeled into one of several means of disposal. But, at Calarcá, if any bananas are not taken away, they are delivered to adjacent cattle farmers and fed to the cows, who eat them peel and all. Cows love unripe bananas, and in fact on one occasion, a herd of cows that lived in a farm adjacent to Calarcá escaped through their fence, forded the primary drainage canal

and went on a banana-eating binge through the plantation. Hundreds of stalks were munched half-off as the cows ate their way through a section of the plantation, before returning, gorged, to their farm. Subsequently, better fences were installed.

The selected and newly-cut bunches of bananas are placed in a second water tank, where they are floated across to a second set of workers. There, four or five workers remove the floral residue from the bottom of each banana, which if not removed will eventually rot the entire box of bananas.

The bananas are then placed into the third water tank, on the other side of which, are three workers who place the bunches of bananas onto large trays. The trays are placed on rollers, and pass through a spray of multi-chemical solution. There are three spraying stations. Immediately after passing through the chemical spray, the bunches of bananas are labeled by three workers, who place one brand-name sticker on each chemical-drenched bunch.

The next step is for four workers to place the bunches of bananas in boxes. This is done on a scale in order that the box weigh 18.14 kg (40 lbs.). The boxes are then placed on a common set of rollers. Rodolfo then verifies the weight of the box and then places it on a conveyer belt, which transports it to the loading area of the packing plant.

Rodolfo boasted that he had "the easiest job in the packing plant", because "you don't really have to do anything". During my field period, this job got even easier when an electronic scale was purchased, and the rollers passed directly over the scale, where the weight was verified, and then continued onto the conveyer belt.

At that point, however, this task was rotated among the workers boxing bananas, and so Rodolfo then boxed bananas, and only occasionally verified the weight.

The banana boxes are built from flat, printed cardboard provided by Dole. Two workers glue boxes, with one doing tops, and the other bottoms.

Before the boxes of bananas are loaded onto the trucks, quality samples are taken by the Roberto, the Quality Control Manager. Individual boxes are checked extensively for defects, for the grade, for the packing, and the weight and number of bananas and bunches are verified. Rigourous statistics are kept and passed on to John Freddy in the plantation office, and to Israel, the Dole Representative.

After Roberto, the quality control manager, inspects the boxes of bananas, they are placed back on the conveyer belt to the loading area. There they are loaded into the Dole trucks by two workers. As mentioned earlier, the boxes are either packed on palettes or directly into the truck, as specified by the packing order. Palettes are used if the shipment is to be further transported from its initial destination. Once the trucks are loaded, the drivers verify all of the paperwork before delivering them to the port of Moín, just outside of Limón, some 30 km. away. Although this is not a great distance, it takes a significant amount of time, largely because the road between Calarcá and Bataan is unpaved. The trucks are driven extremely slowly on this section of the road in order to avoid unnecessary maintenance costs to the trucks. After the trucks have left, Lisandro, the driver, drives the workers home on the company bus, passing through all the surrounding communities.

Quality Control in Action: A Case of Under-Grade Bananas

According to Mintzberg (1993:153), two features of the machine bureaucracy are that it is obsessed with control, and yet at the same time the organization in ridden with conflict, which must be actively controlled. These features can be seen in the following example from Calarcá where nine stems of bananas were cut under grade. This example also demonstrates the actual context for the implementation of quality control practices at Calarcá.

The error was first noticed when the stems of bananas were verified by Ivan, the patio supervisor. It was such a drastic error, that Balto, the field manager, was brought in. When I asked Balto about the incident, he said that the situation was very serious, and that the relevant field supervisor would be brought in, and that they would decide a course of action. Among the possibilities was that the workers would be sent home and not paid for the day's work. In any case, the stems would be paid for by the responsible workers. Balto stressed that the more important issue was that workers were being sloppy in the field and not taking responsibility for the high quality that was required as a common strategy by everybody. About this time, Francisco, the field supervisor, arrived from the field and he began discussing the issue with Balto. Throughout this discussion, Balto reinforced his position of authority over Francisco by telling him that Francisco's lack of vigilance over his workers made Balto look bad, because ultimately, he was responsible for the workers and for the quality of the fruit. Francisco responded that it was impossible for him to supervise every worker all the time and that he had the obligation to give

the workers an opportunity to do better work. Balto responded that responsibility in the field was primary and that the workers must be made to understand this. This would have to be done harshly in order that the workers understand and don't do it again.

This was a typical example of the day-to-day conflicts among the managers of the middle line. Balto, the more senior manager, was ultimately responsible for the quality. It was his opinion that most of the workers were apathetic, careless and lazy. Francisco, on the other hand, had the task of supervising these workers under less than ideal conditions. He was far more willing to give workers the benefit of the doubt and to see the best in his workers. It was a relatively common phenomenon for the field supervisors to play an advocacy role on behalf of their workers to more senior managers.

Ultimately, Balto gave Francisco the authority to resolve it as he saw fit. Francisco lectured the workers briefly on diligence and quality, to which they made excuses about not having the calibrating measure in the field. The workers then returned to the field to replace the stems of bananas, but meanwhile play-fighting and taunting each other on their way out to the field. After they were out of earshot, Francisco told me that this was the kind of attitudes that Balto had been talking about, and that although the missing equipment was not an excuse, it was one reason Francisco was arguing for leniency. Francisco and I then followed the workers into the field. Along the way, we found numerous worker errors. Francisco explained that although this was exactly the carelessness Balto was talking

about, he had to try to encourage quality work from the workers and not to be overly critical. He said that "this is because if you don't, he said, it would work against you and they would be worse". He said that the art of supervising workers was the real basis of banana quality, and that Balto didn't adequately recognize that.

I later learned from the field workers that they had known that the stems were under grade, but that they were hoping that they would pass and that they would reach their quota early. The workers were made to pay for the rejected stems, but the total for each worker was only approximately $0.80. The field workers were unconcerned with paying for the stems, but the board with the workers' percentages did represent cause for concern. In this respect, it was perceived that everyone had to do well or there would be trouble, and they could even be sent home.

This example of the under grade bananas serves to demonstrate the actual implementation of quality control, and of the challenges faced in doing so. It also illustrates some of the tensions among the various types of workers and management, and how quality control, because of its significance, easily becomes the locus of these tensions and disputes.

## Appendix 4: Selected Calarcá Worker Profiles and Biographical Material

I have included brief biographical excerpts of some of the banana workers at Calarcá. This serves to balance the tendency to reify the banana production techniques as anonymous activities. They serve as a reminder that banana production is a human activity.

### Alejandro

Alejandro is 18 years old, and he builds cardboard boxes. He folds the flat cardboard into a box, then he takes a brush and dips it in white glue and slaps it on the four corners of the end flaps, pushing them down. The box then goes onto a metal press, which he operates with his foot. The box goes on, he presses the pedal and it clamps down the flaps until the glue dries. There are two presses, and he alternates them, taking the dried bottom off before putting on every second one. He works very quickly, building four boxes in about a minute. Alejandro has been working at Calarcá for four months. Before Calarcá he worked at another plantation, for a year and eight months, also gluing boxes. He said that they used another box gluing system at the other plantation and that he likes this one better. Alejandro left the other plantation because he was bored. He says he likes his job at Calarcá, and says he only gets sleepy when the rain pelts down on the metal roof of the packing plant.

### Ana (Packing Plant)

Ana has worked at Calarcá for almost a year, but for a total of nine years, including other plantations. She has always done this task, and doesn't want to switch tasks.

Ana (Office Manager)

Ana is 26 years old and is single. She lives by herself in a comfortable and relatively large apartment in Bataan. She is Black and her grandparents came to Costa Rica from Jamaica. She is one of ten children, the youngest of which is 16 and lives with her mother in the country outside of Limón. Her mother speaks only English, and Ana learned Spanish at school. When she was younger, she and her siblings took the train to school everyday, getting up before dawn and arriving home after dark, and when the train was late they often didn't get home until very late at night. Then they had to do their homework. Their mother raised the ten children by herself after being kicked out of the house by an abusive husband. She worked so hard that she couldn't prepare any food for the children while they were at school, so often they went all day without eating. Despite her background, Ana initially denied that her family spoke English. She is not comfortable speaking English, insisting that she doesn't really speak English, but that she would like to learn. After some coaxing, I convinced her to try speaking English with me and found that her English speaking and comprehension were both very good, when I spoke slowly. After some discussion, it was revealed that when Ana said she wanted to learn to speak English, she meant that she wanted to speak English like a North American, rather than with her Black Caribbean dialect and accent, which has

its roots in Jamaica. Ana has worked in several offices, but likes working at Calarcá because she is given autonomy over her work, which comprises all of the administrative tasks of the plantation. She also coordinates information and communications with John Freddy at the plantation office by CB radio.

Elena

Elena is 41 years old, and is separated from her husband, who she kicked out of the house because he was a "drunk". She has three married children, three grandchildren, and a 15 year-old daughter who lives with her. Elena completed elementary school and, although she has only been at Calarcá for just over a year, she worked previously at another plantation for nine years. She would prefer to do selection, which she did at the other plantation, she says because it is easier and you get to rest more. However, she is doubtful that this will happen because it is uncommon to switch tasks. Nevertheless, Elena says that she likes it at Calarcá because the people are friendly and are pleasant to talk to.

Ivan

Ivan is 23 years old, and was born in Nicaragua. He considers Nicaragua 'home', even though his family came to Costa Rica when he was quite small. With the socio-economic and political difficulties faced by Nicaragua, he wonders whether he will ever be able to go back 'home', and to if so, to what? Ivan is a newly-converted Jehovah's Witness, and has a strong interest in social and environmental issues. This is in part because he has been educated by his sister, who was studying at the University. Ivan's concerns about the chemical pollution in

the banana industry are centered around the possibility of chemicals penetrating the peel and thereby poisoning North American and European consumers. This is sadly ironic because as patio supervisor, Ivan comes in direct contact with much higher concentrations of all of the chemicals used in banana production. During my field period Ivan was fired, officially because of a reduction in personnel and because of a "lack of interest" in his work over the previous several months. However, Ivan's dismissal coincided exactly with a re-distribution of management in the packing plant due to other political and personal disagreements, and Ivan's position was re-staffed immediately.

John Freddy

John Freddy is 22, and has worked at the plantation since production began four years ago. He got the job because he is Colombian and don Jaime knew his uncle (Tio, who does construction and maintenance). John Freddy and wife Jessica have two children, John Steven, 2, and María José, 4 months. They got married when, then 15 year-old, Jessica got pregnant. John Freddy said that although it wasn't planned or ideal, he loved Jessica and wanted to do the right thing by her and his children. They both quit school and John Freddy got work at Calarcá. John Freddy commuted from Siquirres, a town some 20 km. from Bataan, but he never saw his family. As a result, they moved to Bataan into the downstairs apartment of a house owned by don Jaime. According to John Freddy, this is hard on Jessica, who had to move away from her family and friends. John Freddy spends most of his spare time with his family, and his uncle (Tio) drives him to Bataan so he can have

lunch at home. They spend weekends in Siquirres with their families. John Freddy has high aspirations and is very motivated. His plan is for both he and Jessica to return to school when the children start school. Jessica would go to night school and he would go on Saturdays. He has embraced the company computer, and dedicates much effort into learning as much as possible about computers. He sees computers as a useful tool for his future, and plans to buy the company computer when it gets upgraded. His enthusiasm for computers is not shared by don Jaime, who according to John Freddy, would just as soon have a chart or a table with the relevant data done by hand.

Mario

Mario is 51 years old, and has worked at Calarcá just over four years. Prior, he was a taxi driver in Bataan, where he had moved from the Pacific region of Costa Rica, when rice was being cultivated in the early 1980s. He got the job at Calarcá because he knew Florencio, the packing plant supervisor, and don Jaime, the administrator, and they had asked him to come to Calarcá. He came because he knew he could get along with the people. Mario prefers working at Calarcá because he likes being in the country and being by himself, and he likes the people here. His wife works in the packing plant removing floral residue. They have a 12-year-old son, and Mario also has another son who lives with his first wife.

Mileidy

At Calarcá, Mileidy (the Spanish phonetic spelling of 'milady') is one of the women who puts stickers on bananas. She just turned 16, and had been working at

Calarcá for four months. She quit school because she would rather earn money than study and go to school. She had worked at a Dole plantation previously for several months, but said that she likes it better at Calarcá because it has a better atmosphere. She also cleans the plantation office. When I asked Mileidy what was in the spray, she answered with teenage superiority, "liquido" [liquid]. When I asked further whether it was chemical, or water, or what?, her response again was "liquido".

Roberto

Roberto is in his mid-forties, and began working in the plantations when he was 12. Not long after he began, he became addicted to marijuana. Without knowing "much about anything" he soon began organizing workers and encouraging them to rebel against management and in his early teens he led a strike at a plantation. When he was 15, a female leader of the communist party came to him and told him that they wanted him to lead the workers youth organization. She was pretty and he had a crush on her so he agreed. Roberto credits the party for getting him off drugs. One of the leaders came to him and said "Compañero, we need you to do work for the cause, and to do this we need you clean". Eventually he became the youth group leader for the whole Atlantic region. He said that for the first time people were interested in what he had to say and they said "Hi Roberto, how are you?", instead of being referring to him as 'Negro'. Eventually, Roberto became committed to the principles of the party and was sent to San José as Party Negotiator. There he did high-level negotiations with top level union leaders and management with respect to worker benefits, and became an expert on the labour

and penal codes and contracts. He studied communist political-economy, and was sent by the party to Cuba and Romania to further his communist education. This entrenched his beliefs about the inequalities and also the potential of Costa Rica. During this time he led many strikes at different plantations, and was jailed and beaten, and was blacklisted twice from the transnationals' plantations.

His first removal from the blacklist was by Philippe Bourgois who had obtained access to Chiquita records for his study on ethnicity in the banana industry (Bourgois, 1989; 1994), for which Roberto was a key informant. His second removal from the blacklist was by his cousin who, when participating in a transnational banana company beauty contest, used the company office as a change room, and at the same time liberated the appropriate document. Both removals from the blacklists facilitated Roberto's employment.

Company blacklists and the anti-union tide of solidarismo have contributed to Roberto's difficulty in gaining and maintaining employment since the dissolution of the banana unions and of the Communist Party. Roberto says that he remains on the blacklists of many companies, such as Bandeco (del Monte), and he says that there's an unfortunate banana worker with the same last names as him but his first name is José, and apparently he is having trouble getting jobs because they think he's Roberto. The transnationals, however, maintain that there has never been a system of blacklisting in the Costa Rican banana industry. Most recently, Roberto worked with Chiquita for 9 years mostly in labour relations, but they kept "clipping his wings" and eventually transferred him to work as a quality control inspector.

He says this was against his ideals, but that he had tempered over the years, and he had learned to be practical for the sake of his family. Roberto has 6 children, with a large gap in age between the fifth and sixth. He explains that the sixth was unplanned but that during this whole period he had unprotected intercourse, but was effectively sterile because of his long-term and close contact with chemicals used in banana production. He says that after a life in bananas, eventually the hard labour and the chemicals took their toll: "My body is old, but I'm not that old [in years]". Roberto got the job at Calarcá because he knew don Jaime. Before don Jaime would hire him, there were intensive discussions about Roberto's not raising 'trouble' at Calarcá. His wife, Vera, and his eldest daughter Xinia run the soda at the plantation.

Rodolfo

Rodolfo has been at Calarcá for almost a month, but worked for 10 years at Chiquita in Sarapiquí. He now lives in Bataan, is single, and has one child who lives with the child's mother. He came to Calarcá because he was bored at Chiquita. At Chiquita he boxed, de-handed, and did some quality selection. Of those tasks, he said that "boxing was good, but you have to pay close attention, and be careful and precise, that de-handing was good, and selection was good, but you're always wet".

Selected Field Workers

Carlos is 45 years old, and has worked at Calarcá for only one month, but has worked ten years at nine different banana plantations. He has nine brothers and sisters, and completed fifth grade. He is married and has three children, ranging

from age eleven to eighteen. Like most workers at Calarcá, he got his job because he knew someone who already worked there. In Carlos' case, he knew Francisco, the field manager. Carlos lives in Sahara, just outside of Bataan, where, unlike most field workers, he owns his own house.

Bernardino is 23 years old and has worked at Calarcá for a year. He has also worked at two other banana plantations for two years. Like many banana workers, Bernardino was born in Nicaragua. He has ten brothers and sisters and has completed grade three. He is single and lives in the plantation housing (baches).

Eduardo is also 23. He has worked at Calarcá for eight months, and this is his first banana job. He completed grade ten, and has seven brothers and sisters. He lives with parents and his older sister, but sometimes stays in the plantation housing (baches).

James is 20 years old, and has been at Calarcá just over four years. James completed grade six, and lives with his mother and his two younger sisters and brother in Bataan. With exception of his four-year-old sister, everyone in the family was born in Nicaragua.

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**Interviews**

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2. Alejandro Bejarano, Director de la Cámara Nacional de Bananeros, member of the social and environmental committee.

3. Roberto Castillo, Ex-union leader and negotiator; quality control manager, finca Calarcá, primary informant for Philippe Bourgois.

4. Rolando Castro Arce, Red Cross worker in Bataan.

5. Oscar Cruz, President of Ecos del Agro S.A.- Organic Bananas and Plantains.

6. Jorge Garrita, Manager at Instituto de Desarrollo Agrario (Agrarian Development Institute).

7. Ramiro Jaramillo, regional coordinator for the regional network for Latin America and the Caribbean (LACNET) of INIBAP

8. Thierry Liscot of CATIE (Centro Agronómico Tropical de Investigación y Enseñanza

9. Leonardo Mata, Epidemiologist at the University of Costa Rica.

10. Alvaro Monge, Manager in the Department of International Trade Negotiations, Ministry of Foreign Trade (COMEX).

11. Federico Odio, Director of Difrusa, marketing company.

12. Don Héctor Sánchez, Managing Co-owner of Bangoshen S.A., finca Calarcá.

13. Padre Solano, Escuela Social Juan XXIII.

14. Luís Umaña Aguiar, General Director of the Asociación Nacional de Productores de Banano (ANAPROBAN).

15. Carlos Vega, Tropical Environmental Coordinator, Chiquita Brands International.

16. Ana Cecilia Vega V., Manager in commercial negotiations at the Ministry of Agriculture and Livestock (MAG); completed MBA thesis on the Costa Rican banana industry.

17. Don Jaime Viana, Administrator of finca Calarcá.

18. Martin Zuñiga, Director of Banana Industry Policy and Statistics at the Corporación Bananera Nacional (CORBANA).