A market-chain analysis of *Chamaedorea* palms: Prospects for Fair Trade labeling

by

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This is to certify that the master’s thesis of

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# TABLE OF CONTENTS

## INTRODUCTION TO THESIS

### CHAPTER 1. LITERATURE REVIEW: THE STATUS, TRADE AND USE OF *CHAMAEDOREA* PALMS

- Introduction
- Human uses of the *Chamaedorea* palm
- The *Chamaedorea* palm market chain
- Harvest intensities and population demographics
- Commission for Environmental Cooperation green purchasing initiative
- Survey of North American palm consumers
- History of Fair Trade
- Social relations in mediation

## CHAPTER 2. A MARKET-CHAIN ANALYSIS OF *CHAMEADOREA* PALMS: PROSPECTS FOR FAIR TRADE LABELING

- Introduction
- Background
- Study Systems
- Methodology
- Results and Discussion

## CHAPTER 3: STRATEGIES FOR DEVELOPING A FAIR TRADE PALM MARKET

- Conclusion

## APPENDIX A: LIST OF ACRONYMS

## APPENDIX B: SURVEY INSTRUMENT

## APPENDIX C: INTERVIEW SCRIPT – CHURCHES

## APPENDIX D: INTERVIEW SCRIPT – SUPPLIERS

## REFERENCES

## BIBLIOGRAPHY
INTRODUCTION TO THESIS:

This thesis is being submitted in partial fulfillment of the requirements for a Masters of Science at Iowa State University. I choose to dedicate my studies at Iowa State University to the science of Sustainable Agriculture. This thesis research is intended to address aspects of agriculture I find critical for its future sustainability; concern for human well-being and the environment.

In this paper I examine to what extent a popular model of alternative trade, Fair Trade, can address issues of social injustice, environmental degradation and rural livelihood security for collectors of an important non-timber forest product, Chamaedorea palm, in threatened forest ecosystems of Mexico. The current problem with Chamaedorea market is the unsustainable nature of the market and harvesting system. Inadequate economic returns from the collection of palm fronds leads palm collectors to harvest unsustainable levels of palm fronds. As the level of economic return to collectors continues to dwindle, collectors are encouraged to seek less sustainable forms of resource extraction, such as timber harvesting and agricultural production, in order to generate an income. Expansion of these land use activities threatens the health of forest ecosystems through deforestation and forest conversion. Eighty percent of Mexico’s forests are occupied by rural forest communities known as ejidos or comunidades agraria. As the threat of deforestation and forest conversion increases due to unstable forest economies, so rises the threat to highly marginalized forest communities and their way of life. If there is no potential for these forest communities to develop sustainable, stable and long-term economies with their forest resources they will create unsustainable economies based on an ever-dwindling resource supply.

The fundamental problem with Chamaedorea palm collection is that producers are not paid fairly for their collection efforts. Collectors are paid based on the quantity of palm fronds they collect. However, intermediaries levee economic penalties for low quality palm fronds picked by the collectors. If the primary intermediary in the palm market chain, the actor who buys palms directly from collectors, discovers 2-3 poor quality palms in a bundle of 12 he, will discard the entire bundle including those suitable for international markets. This drives collectors to harvest larger numbers of palm fronds in order to protect themselves...
against potential economic loses at the point of sale. Increased harvest levels increases pressures on wild palm populations, reducing the health of wild palm populations. As palm plants are defoliated they respond with increased leaf production. However those leaves that do return are stunted and/or require long time periods to reach the 40 cm of length necessary for their sale in international markets. Thus palm collectors have fewer marketable fronds available for them to harvest, which ultimately reduces their income and further encourages collectors to harvest greater numbers of palm fronds. This is a cyclical problem stemming from inadequate economic returns to collectors who are being penalized for the collection of low quality palm fronds.

So some may ask: why a Fair Trade label instead of forest management certification? I believe the fundamental problem of unsustainable *Chamaedorea* harvests is not a problem that can be solved simply by addressing issues of forest or palm management. The fundamental problem that needs to be addressed is income insecurity or the creation of secure rural livelihoods. A Fair Trade label can better address the fundamental mechanism that perpetuates this negative cycle and instability in forest resource extraction, inequitable profit distribution in an extended market chain and the resulting income insecurity for collectors. This economic insecurity is a result of unequal trade relations between the US and Mexico as well as unbalanced power relations between the actors within the Mexican palm market chain. The Fair Trade label also attempts to create long-term trade relations for Fair Trade product producers, offering these communities more stable and reliable trade relations and thus more stable rural economies when livelihoods are secured.

The extent to which a Fair Trade product and its production can counteract negative free market forces depends on the success of the product (i.e. volume of sales). Thus, a major attempt is made in this analysis to determine the potential for developing a Fair Trade palm market that would reward collectors with economic security ultimately encouraging forest conservation. A secondary research question was also examined: If a Fair Trade palm market were to materialize, to what extent would the current market chain need to adjust in order to accommodate the trade of Fair Trade palm?

This paper is separated into three chapters. The first chapter is a literature review that summarizes information available on the world trade of *Chamaedorea* palms and the
dominant model of Fair Trade, coffee. The literature review identifies issues that are important when addressing the function of Fair Trade and provide background information for conducting my study and putting the results into a larger context. The second chapter focuses on an analysis of the *Chamaedorea* palm market chain, and identifies critical opportunities and barriers to the development of a certified palm market. Chapter three presents suggestions for specific strategies and approaches for developing a Fair Trade palm market. Combined, chapters 2 and 3 will be developed into a manuscript to be submitted for publication in the journal Agriculture and Human Values.
CHAPTER 1. LITERATURE REVIEW: THE STATUS, TRADE AND USE OF

CHAMAEDOREA PALMS

Introduction:

Within the palm family there are a vast number of species used for a variety of purposes. Latin America alone, including the United States, has been recognized with over 1,100 palm species (Johnson, 1998). However more recent studies of New World Palms has estimated the number to be around 550 palms native to Latin American. It is obvious from the disparities in numbers that there are problems facing palm classification and thus the proper identification of and usage of palm names (Johnson, 1998; Hodel, 1992). The difficulty in proper identification and name usage is compounded by similar physical and biological characteristics of palms. Although it is tempting, it is hard to generalize traits and facets of palms across the vast array of species, thus it is also difficult to have precise and amplified knowledge about any one palm species or plant. Major areas of study concerning the palm family have focused on five areas: 1. biological/physiological palm studies, 2. indigenous palm use, 3. geographic studies, 4. management and domestication, and 5. oil palm studies (Johnson, 1998).

Much of the literature focused on the Chamaedorea palm family has come from two leading experts: Ken Oyama and Donald Hodel. Oyama and Hodel focus much of their studies on Chamaedorea palm population demographics (Hodel, 1993; Oyama & Mendoza, 1990; Oyama & Dirzo, 1988; Oyama, 1990; Otero-Arnaiz & Oyama, 2001; Oyama, 1993). Ken Oyama is a biologist from the Centro de Ecologia, UNAM, Mexico. The majority of Oyama’s studies have been dedicated to the Chamaedorea species. Donald R. Hodel is a University California Cooperative Extension Environmental Horticulturist. Hodel has worked at U.C. Los Angeles for over 20 years and is considered a world leader in palm taxonomy and horticulture. The majority of their studies on Chamaedorea were conducted in Southern Mexico, which is considered critical habitat for the Chamaedorea, not because of eminent environmental threats but because the largest number of Chamaedorea palms and endemic Chamaedorea palms are found in this area. Of the American literature that is focused on palm markets, conservation through wild harvesting and market studies is likely produced by the North American Commission for Environmental Cooperation and Dean
Current a research associate from University of Minnesota. The CEC was created through the signing of an international accord between the US, Canada and Mexico. It was “established to address regional environmental concerns, help prevent potential trade and environmental conflicts, and to promote the effective enforcement of environmental law” following the implementation of the North American Free Trade Agreement (www.cec.org). Dean works in the Forest Resources department and through the Center for Integrated Natural Resource and Agricultural Management. Little literature exists of *Chamaedorea* palm market studies and the palms use in the floriculture industry. Painfully lacking from the existing *Chamaedorea* market literature is evidence of what occurs to the palm after crossing the border from Mexico into US and Europe. While conducting research in Mexico, palm producers and other institutional figures often asked me, what happens to palm once it crosses the border into the United States. Many people who work with *Chamaedorea* palms within Mexico are curious about the final destination, use, and final consumers of the palms. Due to the high export value of the palm plant, many market studies have occurred within Mexico. The various market channels and economic value distributed along those channels is well documented in Mexico, both by Mexican and other Latin American researchers.

Various sources estimate that the genus *Chamaedorea* has between 100 to 130 species, 45 to 50 of these palms occur in Mexico and 14 are endemic to Mexico; meaning that about 18% of *Chamaedorea* palm species worldwide are found in Mexico (Ortero-Arnaiz & Oyama, 2001; CEC 2002). Thirty eight of these species within Mexico are protected under the Mexican regulation NOM-059-ECOL-94, meaning they are recognized as a threatened or endangered plant species (Eccardi, 2003; CEC, 2002).

*Chamaedorea* habitat is restricted to Neo-tropical rain forest and cloud forest both on the Atlantic and Pacific slopes of Mexico from western to eastern Mexico and down through Central America, it is also found in northwestern Ecuador, the Amazonian areas of Columbia, western Brazil, eastern Ecuador, eastern Peru, and northern Bolivia (Hodel, 1992). The largest number of identified *Chamaedorea* palms comes from Mexico and Guatemala (Hodel, 1992). The area of greatest palm concentration in Latin America is the southern part of southern Mexico and northern regions of Guatemala while the second greatest area of concentration is found in Central American regions of Costa Rica and
Panama (Hodel, 1992). Few *Chamaedorea* have a wide-ranging habitat with the exception of *C. tepejilote* and *C. pinnatiformis* found in Mexico, Guatemala, and throughout Central America (Hodel, 1992). *Chamaedorea* palms prefer the habitat of dense primary forests (Hodel, 1992). Often palms will colonize and thrive in recovering secondary forests but are not found in heavily disturbed forest and or pasture habitat (Svenning, 1998). Palms require the protection of shade, abundant moisture, and humidity otherwise they are likely to be burnt by the sun (Hodel, 1992). Palms are found in various substrates and in southern Mexico they are often found in karsts or limestone soils, with good soil drainage and abundant soil organic matter (Hodel, 1992; CEC, 2002). Their habitat ranges from sea level to about 2,600 meters above sea-level (Holden, 1992; Current, 2003; Johnson, 1998). *Chamaedorea* habitat, within Mexico is concentrated in the states of Oaxaca, Veracruz, Chiapas and Tabasco (Hodel, 1992). Simultaneously these are the areas with the greatest production of *Chamaedorea* palms in Mexico (Eccardi, 2003; CEC, 2002).

The most heavily traded and studied palms of the *Chamaedorea* genus are: *C. tepejilote*, *C. oblangata*, and *C. elegans*. Of these three palms the most commonly found and heavily marketed *Chamaedorea* are *C. tepejilote* and *C. oblangata* (Hodel, 1992). They are also the least valuable of *Chamaedorea* palms (CEC, 2002; Hodel, 1992). *C. elegans* is the most sought after and expensive of *Chamaedorea* palms used in the cut foliage industry (CEC, 2002; Hodel, 1992). *C. seifrizii* is the most popular *Chamaedorea* cultivated for use in the U.S. horticultural industry, where it is used as landscaping foliage and indoor houseplants (Hodel, 1992). *C. elegans* seed is used to grow indoor and potted plants and is the most popular seed in European markets where *C. seifrizii* is the most popular seed used in U.S. markets (Hodel, 1992). Total imports of palms to the U.S. are estimated to be between 300 and 350 million per year (CEC, 2002). The negative environmental affects of the world trade in neo-tropical palms, such as reduction in forest health and loss of habitat, are compounded by local socio-economic and socio-political problems. Due to increasing pressure to secure a livelihood from scarce and insecure lands in palm producing countries, native palm habitat is rapidly decreasing. The contribution of the over harvesting of Non Timber Forest Products (NTFP) has become evident by the rapid loss of forest habitat where these *Chamaedorea* palms reside.
Due to increasing forest destruction and low wages paid to palm collectors the Commission for Environmental Cooperation (CEC) of North American has commissioned market studies of the *Chamaedorea* palm throughout Mexico and Guatemala, the major producing countries of *Chamaedorea* palms (CEC, 2002). In 2003 the CEC sponsored an initiative to investigate possible marketing strategies for “sustainably managed and harvested palms of the *Chamaedorea* genus in North America and potentially Europe” (‘Fair Trade proceeding’, 2003: 1). During the recent 2004 World Trade Organization meetings in Cancun the CEC coordinated a conference between local Mexican and Guatemalan representatives of palm producing communities, “national and international certifying bodies, universities and Christian congregations” to discuss the potential role of North American and European Christian congregations may play in purchasing sustainably harvested palm fronds at premium prices (Sustainable trade symposium, 2003). The project hopes to encourage forest protection through principles of market-based conservation, i.e. high product prices that serve to protect forests and encourage sustainable rural development.

**Human uses of the *Chamaedorea* palm:**

*Chamaedorea* palms have varied economic uses. The economic value of the palm depends upon its use, leaf structure, and the palm species used. Price fluctuates along the market chain depending on who is selling the palm and where the palm is being sold. Palm fronds reserved for sale in American and European markets are of better quality and higher cost than those, which are sold in Mexican national markets. Within the United States and Europe *Chamaedorea* palms are used for two general purposes: cut foliage used in the floriculture industry and cultivated palm plants used in indoor and outdoor landscaping. Palm fronds are used in the floral industry in a variety of manners. Most often *Chamaedorea* palm leaves are used in large flora displays, which adorn hotel entrances, church weddings, or church funerals (CEC, 2002; Bowman, 2003). They are also used in religious ceremonies as decoration or symbolic figures, most notably in the Christian celebration of Palm Sunday. In the horticulture industry *Chamaedorea* palms are often cultivated in U.S. greenhouses from wildly collected Mexican or Guatemalan seeds. These palms are grown in large nurseries in
California, Florida, and Texas and used as household decoration or landscaping foliage (CEC, 2002).

Palms reach the United States and greater Europe via an extended market chain. There are about five stages of exchange within Mexican markets and about two stages of exchange with the United States, although it can vary greatly depending on regions, production methods, and contracts (CEC, 2002).

*Church use of Chamaedorea palm:*

Christian church congregations are a major buyer of cut palm leaves within the United States (Bowman, 2003; CEC 2002). A single congregation of 1,100 to 1,500 can use as many as 700 palm fronds for Easter Sunday celebrations and sales from palm fronds for Palm Sunday alone may be worth up to 4.5 million dollars a year (‘Palms for Easter’, 2004). Palm Sunday and Easter week celebrations are the time of highest palm consumption for a single date for congregations throughout the year (Bowman, 2003; CEC, 2002). Palm leaves are used as a symbolic representation of Christ’s fateful entry into Jerusalem (Bowman, 2003; CEC 2002). Easter palms are sold either as individual leaves or pre-made ornaments; they are not in floral displays when used in Palm Sunday celebrations (CEC, 2002). Congregation members may use palm leaves to make ornamental crosses or symbolic crowns to wear during Palm Sunday celebrations (CEC, 2002). After Palm Sunday celebrations are concluded congregation members often decorate their homes with the ornaments constructed from the palm leaves, where they remain until next year’s celebrations and new ornaments are made to replace those from the previous year.

In addition to Easter week and Palm Sunday celebrations churches purchase palms throughout the year from florists because they are incorporated into large floral arrangements for used in weddings or funerals (Bowman 2003; CEC, 2002).

*Use of Chamaedorea palm in the floral industry:*

*Chamaedorea* palm leaves are used as structure and filler in large floral displays, giving the displays volume, height, and body at little cost to the florist (Bowman, 2003; CEC, 2002; Hodel 1992). There are many characteristics of palm, which make their use attractive
to florist. The leaves of *Chamaedorea* palms have a relatively long shelf life, versatility of uses in arrangements, and it is possible to “trim fronds and remove poor tips without hurting their appearance” (CEC: 5). The exact quantities and value of *Chamaedorea* used in the floriculture industry is difficult to decipher because they are often grouped together with other floral greens under “cultivated greens” when reported (CEC, 2002).

A larger variety of cut palm leaves are sold in Mexican national markets, in addition to the structurally imperfect *C. elegans*, *C. tepejilote* and *C. oblangata* that are not of suppliers quality for the international markets. In both international and Mexican national markets different palm varieties will bring different prices.

*Additional human uses: Horticulture, food, fuel and fiber:*

Throughout history and across cultures multiple varieties of palms have been used for a vast number of purposes from medicinal uses to construction materials (Flores & Ashton, 2000; Johnson, 1998; Ratsirarson, Silander, Richard, 1996). Most often the palms utilized by indigenous cultures are collected from the wild, causing pressure on wild populations in environments already stressed by other local uses or environmental threats (Flores & Ashton, 2000; Ratsirarson, Silander, Richard, 1996; Johnson, 1998).

The horticultural uses of palm *Chamaedorea* can be divided into three parts: cultivation for landscaping, indoor household decoration and palm collection. *Chamaedorea* palms are also capable of producing food and fiber products (Hodel, 1992; Mont, Gallardo, Johnson, 1994). *C. tepejilote* is known for producing tasty food products, while other palm species are known for producing oils and fibers (Mont, Gallardo, Johnson, 1994). *C. tepejilote*, often refered to as “mountain maize”, produces large inflorescences (3-40 cm long) which are edible when immature; no other *Chamaedorea* produces edible foods (Mont, Gallardo, Johnson, 1994). An inflorescence is defined as a group or cluster of flowers on a branch of a plant. The flowers of the *C. tepejilote* are densely packed together surrounding a fleshy stem or axis, the flowers are covered by a spathe. Production of *C. tepejilote* inflorescence is conducted on a commercial scale for “nostalgia markets” markets in the United States, export value of the crop is negligible and not included in national
Guatemalan agricultural statistics (Mont, Gallardo, Johnson, 1994). Commercial production of *C. Tepejilote* inflorescences occurs only in Guatemala.

**The *Chamaedorea* palm market chain:**

Mexico and Guatemala are the two largest exporting countries of cut *Chamaedorea* palm leaves. Mexico supplies over 55.34% of the world's *Chamaedorea* while Guatemala supplies about 44.12% and the remaining 0.54% are supplied by countries such as Costa Rica, Colombia, and El Salvador (www.raises.org, 9/7/04). The market value of palm production within Mexico is estimated at about 30 million dollars per year, providing a source of income and employment for over 100,000 people in Mexico (Vovides & Bielma, 1994). It is estimated that over one million leaves are harvested and 205 kilograms of seeds are collected daily (Vovides & Bielma, 1994). Recent studies in Mexico, conducted by the CEC (2002), put the estimates of exported palms from Mexico at $20 million U.S. dollars.

Mexican states which produce the largest volume of palms, in order from greatest to smallest in 1999 were: Veracruz, Tamaulipas, Chiapas, San Luis Potosi, Oaxaca, and Hidalgo (Eccardi, 2003). Information about palm production within Guatemala is less specific and studies cite that the area of greatest production/harvest is simply the Northern region of Guatemala. “At least half the farmers in the Central Peten of Guatemala earn additional income from harvesting fronds, and more than a quarter of household heads support themselves exclusively by collecting fronds” (‘Palm for Easter’, 2004). It is estimated that over a million dollars annually is contributed to the Guatemalan economy due to *Chamaedorea* palm fronds (www.rainforest-alliance.org, 9/25/04).

Market chains can be mapped in multiple directions, depending on the product and system characteristics. The direction a product's market chain may follow depends upon the point a product enters the chain. It may either move forward, backward, or in multiple directions (Kaplinsky & Morris, 2000). For the sake of analysis they are often simplified to a single direction (Kaplinsky & Morris, 2000). A wild harvesting market chain is one that only moves in the forward direction, beginning with the forest and collector and moving forward to consumers. A plantation system demonstrates both a backward and forward moving chain.
The first link in a plantation system begins with input suppliers for multiple products and moves forward towards consumers.

Below I will outline the basic market chain of wildly harvested palms. The initial link and entry point into the chain begins with the forest/ejido lands and collectors. Collectors will sell collected palms to a coyote which visits the community. The coyote will then sell the palms to a regional middleman, where palms are sorted based on quality and quantity, and finally this regional middleman will sell to a larger exporting company. This exporter may processes palms further by re-grouping and banding palms together. Palms are exported from Mexico to the United States or Europe. In the United States palms are imported by half a dozen companies into 3 states; California, Florida, or Texas (CEC, 2002). These importers/wholesalers then distribute the palms to retailers in regions of the US that are most accessible to the importer (CEC, 2002). Palms than reach final consumers via large floral displays or direct purchases by churches from wholesalers or local florists (CEC, 2002).

Palm collectors will collect palm fronds year round (Endress et al., 2004; Espinoza et al., 2003). Harvest intensities will wax and wane as other agricultural activities are intensified (Espinoza et al., 2003). Collectors will spend 3-5 days per week collecting palms, traveling between 1 to 5 hours to collection sites (Endress et al., 2004; Espinoza et al., 2003). Collectors often return to the same collection site once to twice a year and collect 30 to 100% of new leaves (Anten, Martinez-Ramos, Ackerly 2003). Established palm collectors have a defined technique for frond collection that minimizes palm damage (Vovides & Bielma, 1994). Younger palm collectors or children accompanying their fathers to collect often damage palm plants as they have no established collection techniques (Vovides & Bielma, 1994). After leaves are collected, harvesters will sort and bundle fronds for sale, discarding some fronds prior to sale due to missing leaflets, yellowish color, or obvious insect damage (Endress et al., 2004). Palm frond for sale are bundled into groups of 25. One bundle is sold for $2.50 pesos or, U.S. $0.28 (Endress et al., 2004). Leaves are than shipped to a processing facility and than shipped overland to the United States (Endress et al., 2004). A collector’s ability to gather palms depends on the landscape in which he/she works. On an average day collectors can harvest 16-30 bundles and on a good day between 30-60 bundles (Endress et
In 1992, Vovides and Beilma, estimated that 1 million leaves were harvested per day in Mexico.

United States and Europe import the largest quantity of palms. Palms that arrive in the U.S. are often re-exported by U.S. firms to Canada (CEC, 2002). Within Europe the largest importers of cut palm foliage are Holland and Germany (www.raises.org, 9/7/04). The U.S. consumes as much as 45 million palm leaves in the Easter period alone, valued at about U.S. $4.5 million (Bowman, 2003). The importation of palm leaves from Mexico and Guatemala into the United State is handled by six major importing firms located in Texas and Florida (CEC, 2002). Palms reach the US or Europe by truck or plane (CEC, 2002).

Mexican exporters prepare the supply truck for exporting the palm fronds, should anything happen during shipment between the exporter and the U.S. border the responsibility is that of the exporter, who is held accountable for any loss of palm (CEC, 2002). Once palms are inside the United States, importers and wholesalers are responsible for the products condition (CEC, 2002). Use of refrigerated trucks helps to maintain palm quality. Importers receive palms on a weekly basis and make deliveries to wholesalers and retailers within one day of receiving shipment (CEC, 2002). Importers from Florida concentrate their distribution within the East Coast area, while importers from Texas concentrate on the Midwest and Western states (CEC, 2002). Importers sell palms by the case, while wholesalers sell by the bunch, meaning they break down the cases they receive from importers (CEC, 2002). According to CEC’s (2002) research a wholesaler pays between U.S. $0.80 to $1.70 per bunch, while cases may cost between U.S. $25.50 to $50. If wholesalers do not breakdown the cases into bunches they would simply be acting as another warehouse facility before passing on the case to another customer (CEC, 2002). A bunch of palms consists of 25 palm fronds (CEC, 2002).

Floral retailers represent the last link between the final consumer and palm gatherers. The majority of retailers receive palms by the bunch (25 leaves) from floral wholesalers (CEC, 2002). Consumers will receive palms via large floral displays designed for funerals, weddings, or other parties. The demand for palms has remained constant over the past 25 years (CEC, 2002). CEC (2002) calculated that retailers may pay between U.S. $1.45 to $4 or more per bunch, the most frequent cost per bunch being U.S. $2 to $2.50.
Churches are the consumers that explicitly request to buy individual fronds. This type of transaction occurs once a year. Otherwise churches indirectly buy or use palm fronds in floral displays. Other consumers are often unaware that they have purchased palm fronds as they have been incorporated, often without consumer specifications, into larger floral displays.

**Harvest intensities and population demographics:**

Multiple studies have been conducted on the effects of defoliation on palm growth rates, survival, leaf production and fecundity rates (Endress, Gorchov, Noble, 2004; Endress et al. 2004; Oyama & Mendoza, 1990; Jones & Gorchov, 2000; McKean, 2003; Flores & Ashton, 2000). In general studies (Oyama & Mendoza, 1990; Endress, Gorchov, Noble, 2004; Endress et al., 2004) have looked at the effects of one of four or all four levels of defoliation on palm leaf regeneration: 1) control (no leaves removed), 2) 1 leaf removed per year, 3) 2 leaves removed per year, 4) 3 leaves removed per year and 5) complete defoliation.

Flores and Ashton (2000) studied the effects of harvesting leaves only versus the entire palm crown, in *Genonma deversa* palms, on plant survival. Flores and Ashton (2000) stated that harvesting of leaves only and not the entire crown of the palm plant, represents a more sound harvest method, allowing for some leaf regeneration. Of the other studies (Endress, 2004; Oyama & Mendoza, 1990; McKean, 2003; Jones & Gorchov, 2000). Oayam & Mendoza (1990) heavily cited on this subject. Oyama & Mendoza found that complete defoliation of *Chamaedorea* palms caused highest rates of leaf production. Palm survival was not affected by defoliation treatments (Oyama & Mendoza, 1990). Following defoliation, male *C. tepejilote* produce greater numbers of inflorescences, the reproductive flowers of palms. However male *C. tepejilote* have lower resource requirements for successful reproduction than female *C. tepejilote* (Oyama & Mendoza, 1990). Partially defoliated palms produced twice as many leaves as control palms while totally defoliated palms produced three times as many leaves as control palms (Oyama & Mendoza, 1990).

Although the response of *Chamaedorea* and other palms to defoliation is increased leaf production, the new leaves produced are of less marketable quality than those previously harvested (Endress et al., 2004; Jones & Gorchov, 2000). This significantly affects producers...
and harvesters of palm leaves because if leaves which grow back are of lower quality, they can not be sold in international markets, and are thus worth less money or none at all. If those leaves that do return are of unmarketable quality, palm collectors are forced to walk greater distances from their homes to find suitable leaves. This often means either leaving communal (ejido lands) or going into territory that has already been stripped, forcing collectors into territorial disputes only to collect low numbers of inferior leaves (Jones & Gorchov, 2000). Collectors thus undermine their own ability to maintain stable economies, and cause themselves greater work for less pay.

The value of quality versus quantity:

Presently the standard by which palms are traded in Mexico is based both on quality and quantity. Following initial collection the palms are sold to the coyote type based on the quantity of fronds collected. The more leaves palmilleros sell to the coyote the more money they will be paid (Endress et al., 2004). Thus there is little incentive for collectors to sort palms prior to selling them or impose any restrictions on harvesting fronds based on quality standards. All leaves are subject to harvest if they are clean and of proper length, 40 cm (Endress et al. 2004). “Palmilleros are aware that many leaves they harvest may not make it to the marketplace; because the price of leaves is low, however, and they are heavily dependent on C. radicalis, many harvest these unmarketable leaves anyway to meet daily needs”(Endress et al., 2004: 829). Over harvesting, is a means for palmilleros to protect themselves from reduced palm prices, however it puts the future of quality harvests at risk. Forty to sixty percent of harvested leaves are assumed to be culled, within exporting nations, due to various reasons (CEC, 2002). If this large amount of culling could be prevented middlemen and exporters, might be able to pay higher prices for reliably higher quality palm fronds (CEC, 2002).

Palm leaves that make it to the United States or Europe have been selected due to high quality, not quantity (CEC, 2002). During the CEC (2002) research efforts, the issue of quality was raised by retailers as a key consideration when purchasing palms fronds. Quality is based on five criteria: leaf height, color, size, health and freshness (CEC, 2002).
It is the hope of the CEC palm project that higher prices will result in a reduction of leaves harvested and that the reduction in the quantities of palms harvested will positively influence the quality of palms produced. If palm frond quality is to improve it will be easier to sell higher priced certified fronds. By reducing the quantities of palms harvested in the wild, forest ecosystems will be better protected from ill effects of over harvesting, while the increased cost of palm fronds will mean greater socio-economic returns to the collectors (Endress et al. 2004; CEC, 2002). Little area exists for value-added processing in the palm industry because there is so little processing to be done with palm fronds. Harvesting strategies based on quality offer one of few options for value-added harvesting or processing (CEC, 2002). “The demand for greater quality has increased in recent years and is a primary consideration for florists. It should be a key element in any effort to certify or promote *Chamaedorea* as a green-market product” (CEC, 30). Thus if collectors can be guaranteed a price for the palms which they have collected based upon the quality of the leaf it may help reduce excessive harvesting and culling of unmarketable palms, reducing pressure on natural populations and maintaining forest health.

It has been suggested by a recent CEC (2002) report that the greatest potential for certified or Fair Trade palm sales lies within the relationship between palms and churches. Churches buy large volumes of palms at a specified time of the year (Palm Sunday) and consciously or not continue to buy palms from the florist when buying large floral decorations for use in church weddings and funerals (CEC, 2002). In the case of Fair Trade coffee, churches acted as an impetus for promotion and consumption of a more socially just coffee (Raynolds, 2002). “Alternative trade organizations linked to church and development groups were the first to put Fair Trade ideas of ‘equality’ and ‘partnership’ into practice” (Raynolds, 2002: 410). In the case of palm church organizations not only have the ability to highlight the need for Fair Trade palm sales and issues surrounding palm production, but also can actually buy the Fair Trade product itself in large volumes.

**Commission for Environmental Cooperation green purchasing initiative:**

The CEC has begun an international effort to coordinate and expand research of green marketing, or market-based conservation methods across Mexico, Canada, and the United
States. The objective of the CEC research collaboration is to understand how trade affects the environment in a post NAFTA continent. The CEC research investigates ways in which trade and development can be made more compatible by utilizing market-based conservation methods.

Currently the CEC is working on a green market or green procurement initiative for the *Chamaedorea* palm. The initiative will attempt to gain a green label for palms through an “alternative” certification scheme. In general the project believes that the certification of the *Chamaedorea* palm frond will encourage forest conservation through increased economic returns for palm collectors. The CEC group has chosen to work only with wildly harvested palms from Guatemala and Mexico. Group leaders believe that the certification of wildly collected palms will help to conserve forests where wild palm populations reside. It is the wild Non-Timber Forest Products (NTFP) that entice local collectors of NTFPs to conserve the remaining forest area so that they are capable of accessing commercially valuable natural resources. A balance must be found in retaining a steady palm market and sustainable harvest methods if forests are to be conserved via this method (‘Palm for Easter’). It is this balance which maintains a steady economy for local peoples while simultaneously providing incentive to conserve the forest resources, without a steady palm market or realistic prices little incentive is left to conserve forest resources and may encourage the greater use of “free” forest resources, resulting in more forest destruction (‘Palms for Easter’, 2004).

Presently the CEC group is drafting certification requirements for the harvest and trade of *Chamaedorea* palms. The CEC working group is comprised of people from varied backgrounds and multiple institutions within Latin American, Canada, and the U.S. Key players involved in the working group representing palm importers is International Palm Fronds, church consumers is Lutheran World Relief, and collectors/producers are multiple indigenous communities. Educating consumers about the potential problems of collection and benefit of certification for palms is the next issue the CEC will attempt to address.

The immediate goal of the CEC group is the creation of a pilot palm project, which will facilitate direct sales of “certified” palm fronds between local/indigenous communities in Mexico and Guatemala and the Mid western United States by Easter week 2005. The palms supplied this Easter will not have a Fair Trade label certified by the FLO or any third
party label but an implicit guarantee will be established and maintained between suppliers and buyers of palms. Prior to this project, project manager Dean Current, had undertaken extensive research on the palm market of Latin America, United States, and Europe. Current (unpublished) has also conducted a survey of about 276 churches in the United States. Survey questions were focused on congregations’ awareness of production and socio-economic issues surrounding wild palm collection, willingness to pay for Fair Trade palms for church uses, and how much more are churches willing to pay for Fair Trade palm. The preliminary results have shown that many churches are interested in Fair Trade palm and are willing to pay greater prices for the Fair Trade palm, hence the impetus for the pilot project.

Certification options available for Chamaedorea palms:

There are many certification options available for the Chamaedorea palm. Fair Trade is one of four potential certification schemes the CEC is considering. The two certification strategies with greatest relevance for Chamaedorea are forest management certification and social certification (Fair Trade). Forest management certification is one which “mainly assesses ecological aspects of resources management, both at the forest and species/product level. These schemes aim at ensuring the sustainable production of forest resources” (Current, Lasseno & Cervantes, unpublished). Social certification promotes “fair and ethical trade, assure[s] that labor conditions are acceptable and benefits are equally shared among those involved in production and trade” (Current, Lasseno & Cervantes, unpublished). The two additional certification labels, which may have some relevance to wildly harvested palms, are product quality certification and product origin labeling. Product quality certification is relevant not only to the product but the entire value chain. Certification assures that production, processing, packaging, and manufacturing are in compliance with the regulations of a selected certification scheme, it is often a product specific only” (Current, Lasseno & Cervantes, unpublished). Lastly, product origin labeling has no regulation of production methods or processing practices; it simply refers to the geographic region from which the product came. Such certification would have little relevance for forest management but might benefit collectors in a well-known growing region.
Finding the correct label to use and work under is important in a budding certification effort. The label chosen will dictate the focus area and selling point of the product. Labels may be chosen to achieve specific goals of both producers and consumers. Labels may not directly dictate certain production practices, but compliance in some areas may be implied. The mechanism by which certification dictates production practices is critical in an emerging certification project. Is it simply implied desires that will dictate better production practices or specific regulation of those practices that will secure compliance with Fair Trade standards guaranteeing consumer rights and environmental protection? The Fair Trade label seems best suited for the goals of the CEC project and future forest management and rural development opportunities with *Chamaedorea*.

An emerging initiative could use more than a single label to accomplish a wider spectrum of conservation or social justice goals. Combining both Fair Trade and forest management certification mechanisms could enhance the management of wild palm populations through technical assistance and forest management plans provided by forest management inherent in forest certification schemes. Dual labeling in coffee, shade coffee and organic certification, is a proven method used in a strengthening environmental protection of critical avian habitat and forest preservation through the use of complementary labeling schemes.

**Survey of North American palm consumers:**

Dean Current and colleagues from the University of Minnesota recently conducted a survey of churches throughout the United States. The survey, yet unpublished, consisted of 21 questions that attempted to measure congregational interest and participation in Fair Trade and environmental programs. The survey also questioned congregations about the type of palms they used in Palm Sunday celebrations and their willingness to pay more for a certified palm product. The survey was sent out to 700 respondents, 276 responses were received. Some congregations were contacted personally so survey design could be improved.

Respondents were asked about there participation in environmental programs, 74% stated they participated in some form of environmental program. Ten percent indicated they participated in a Fair Trade program. When asked which was more important, social or
environmental programs, 83% of respondents indicated that both issues were equally important. Ten percent indicated that social programs were more important, while 3% believed environmental programs to be most important, the remainder did not respond. Ninety-nine percent of the respondents believed that palm producers should get a fair price for the palms they produce. Palm certification efforts represent both an environmental and social concern (Current, Lasseno & Cervantes, unpublished). Eighty-four percent of respondents said that they would be willing to pay an additional $0.10 per frond for certified Fair Trade palm fronds and still maintain current order volumes (Current, Lasseno & Cervantes, unpublished). This indicates that those surveyed would like to participate in a Fair Trade program and would be willing to pay more for those fronds (Current, Lasseno & Cervantes, unpublished). The maximum amount surveyed congregations would be willing to pay per frond was $0.39 (Current, Lasseno & Cervantes, unpublished). However 59% of respondents stated they would be willing to inform congregation members of the Fair Trade palm while 41% indicated they would not.

According to the survey by Current, Lasseno and Cervantes (unpublished) 83% of congregations indicated they buy palms for the Easter week celebrations, however few could actually produce the name of the palms they use and it was obvious from the survey that not all churches were using Chamaedorea palms. Buying patterns of churches and use of the palms are critical areas that warrant further study (CEC, 2002). It was found that some churches buy pre-made crosses, avoiding the use and contact of initially raw palms (Current, Lasseno & Cervantes, unpublished). Churches also have varied buying patterns. Some congregations buy palms in individual or grouped leaves, some buy on behalf of the congregation while others assume congregation members will produce their own palms, and still others will buy either from a florist, a floral wholesaler or from a church wholesaler which specializes in the sale of church related products (Current, Lasseno & Cervantes, unpublished). 19% of churches indicated they use palms for wedding and funeral arrangements; however, more congregation members than church administration buy floral arrangements for such events.
History of Fair Trade:

The Fair Trade movement first began in Europe during the 1950s/1960s (Ericson, 2002; Littrell & Dickson, 1997). Handicrafts were the first product sold through solidarity shops and church outlets (Ericson, 2002; Littrell & Dickson, 1997). Church based missionary groups were selling the products of the peoples their mission groups were working with (Moore, 2004; Ericson, 2002; Tallontire, 2000). In the past ten years the volume of Fair Trade sales and the momentum of the movement has increased (Rice, 2000; Renard, 2003, Hudson & Hudson 2003b). However worldwide sales of Fair Trade products only represents 0.001% of total global trade (Rice, 2000; Renard, 2003). The most well established Fair Trade products are coffee and bananas (Renard, 2003). Numerous other foodstuffs carries a Fair Trade mark such as: honey, tea, chocolate, juices and flowers (Renard, 2003; Rice, 2000; Moore, 2004). According to Raynolds (2003) 60% of Fair Trade products are food products.

The basic principle of Fair Trade is to “create new more egalitarian commodity networks linking consumers in the global North with marginalized producers in the global South”, it is a means of trade which “connects producers and consumers in more equitable, more meaningful and more sustainable ways” (Raynolds, 2002: 404). Fair Trade has been defined by FINE (an umbrella organization which represents four large Alternative Trading Organizations) as “a trading partnership based on dialogue, transparency, and respect that seeks better trading conditions for, and securing the rights of, marginalized producers and workers, especially in the South” (Renard, 2003: 91).

In addition to enhancing producer livelihoods and promoting democratic organization Fair Trade is a movement which attempts to counter commodity fetishism by elucidating the methods of production and trade for certified products (Hudson & Hudson, 2003). The aim is to make the social relations of production and exchange visible to consumers, via a Fair Trade label (Hudson & Hudson, 2003: 413). It attempts to work within the existing market and distribution channels, instead of creating an alternative outside the market, which can be more easily sidelined (Renard, 2003). Involving traditional market chain actors enhances their stake in the success and function of the Fair Trade market thus they are less likely to object to or subvert its trading mechanisms (Renard, 2003). By working within existing
market channels, Fair Trade uses those dominant actors in commodity chains to distribute product (Renard, 2003). "Alternative trade [i.e. Fair Trade] thus tries to break down the isolation endemic in commodity society and begins to differentiate on the basis of production processes rather than (or at least in addition to) the characteristics of the final product" (Hudson & Hudson, 2003). Raynolds (2000) suggests that the significance of Fair Trade products is not in their market share, which she assumes will always be minimal, but the ability of Fair Trade products to challenge traditional market mechanisms by making their exploitative nature visible to consumers and traders of the product.

*Fair Trade coffee:*

Fair Trade attempts to lift the veil shrouding traditional trade relations and illuminates the negative affects that such traditional trading mechanisms have on people and the environment. The means by which Fair Trade lifts the veil of commodity fetishism is through consumer education and partnership building between producers, traders, and consumers (Hudson & Hudson, 2003a). The most successful fairly traded product has been coffee. European Fair Trade coffee imports are valued at over 300 million dollars and are sold in over 35,000 supermarkets in addition to universities, corporate offices and government institutions (Raynolds, 2002). In 2000 the United States Equal Exchange reported 7.2 million dollars in coffee sales, however the newly established TransFair USA has greatly increased the U.S. Fair Trade coffee market since then (Ericson, 2002). Jaffee et al. (2004) states that Mexico “was the birthplace of the international fair trade movement in its current form.” At the request of organized Mexican coffee producers for equitable access to European coffee markets, at significant quantities, the Max Havelaar seal was formed (Jaffee et al., 2004). Today Mexico is the largest exporter of Fair Trade coffee in the world (Jaffee et al., 2004). Raynolds (2002) stated that the Netherlands is the largest coffee importer followed by Germany. The United State is rapidly becoming one of the largest Fair Trade coffee importers and it is possible that this rapid rise in awareness of US consumers may spread to other Fair Trade products (Raynolds, 2002).
Fair Trade flowers:

Among flowers Fair Trade label exists only for roses, the label was created in by Max Havelaar in April 2001 (Max Havelaar website). In the United States almost no floral certification programs exist, yet Europe is home to many different floral certification movements that look to improve upon harmful floral production practices by reducing chemical inputs (I.e. organic flowers) (CEC, 2002). CEC (2002) has noted that in the United States there is “almost a total lack of awareness of certification of products used in the floral industry” by wholesalers and retailers (37). However in Europe there is growing demand for certified floral products (CEC, 2002). Germany has started the Milieu Project Seirteelt and the Netherlands has created the Flower Label Program, which certifies flowers grown in Africa, Latin America, and Europe (CEC, 2002). In 1999 there were over 3,309 retailers and growers participating in the Flower Label Program in the Netherlands and 326 international participants (CEC, 2002). It is obvious from these numbers that the European market is much more developed in the area of certified or Fair Trade flowers and it seems to show similar trends with other products as well. According to the CEC (2002) green market or eco-labels for the floral industry have been found only in Europe. Surveys conducted in the U.S. revealed that 90% of floral retailers are unaware of similar efforts in the United States floral industry (CEC, 2002).

Structure of Fair Trade and the role of ATOs, consumers, and producers:

Initial Fair Trade transactions were refereed to as “goodwill selling”, which soon evolved into what has been titled solidarity trade, which lasted from 1970s to the late 1980s (Tallontire, 2000). Many well established Alternative Trade Organizations (ATO) such as Christian Aid, Traidcraft, World Development Movement, Oxfam, and others were heavily invested in solidarity trade, which was marked by the selling of traditional handicrafts in small independent Northern retail outlets (Nicholls, 2002; Tallontire, 2000). The Solidarity trade, which rested on the goodwill of consumers, their desire to express politically motivated buying actions, and a more market-oriented trade partnership, was the dominate trading strategy of ATOs in the 70s, 80s, and up into in the early 90s (Tallontire, 2000, Nicholls, 2002). Following the solidarity wave, Fair Trade organizations shifted their
emphasis to a more “mutually beneficial trade” theory (Tallontire, 2000). Mutually beneficial trade of the 1990s placed greater emphasis on consumer needs, and stressed that trade could be mutually beneficial to both consumers and producers, offering consumers quality products and the “feel good feeling” of Fair Trade (Tallontire, 2000; Raynolds, 2002). Recently the mutually beneficial trade strategy has further developed into a more defined and concrete partnership between ATOs, consumers and producers (Tallnotire, 2000). As Tallnotire (2000) points out the concept of partnership is “notoriously slippery”, but the aim of the trading partnerships is to establish more balanced long term trade relationships, where confusion over terms such as counterpart and supplier, may be avoided (168). Mirroring these Fair Trade theories has been the evolution of the Fair Trade consumer. Through time consumer demands, values, and basic attitudes have grown from the 1960’s excited consumer, 1970’s self focused consumer, the aggressive acquisition consumer of the 1980’s, to the caring consumer of the 1990’s, where Fair Trade is more popular than ever (Strong, 1997).

Alternative Trading Organizations:

Although Fair Trade standards are based on progressive ideas of trade and trade relations the space in which products are traded is rooted in traditional commercial channels. Alternative Trading Organizations (ATOs) work directly with producers to help market their products in these channels. ATOs combine the functions of exporter and retailer (Littrell & Dickson, 1997). By playing this dual role and eliminating middlemen they are able to keep overhead low and return 33-45% of retail prices to producers compared to 10% in traditional retail channels, in addition ATOs often help producers with product design, quality control, management and shipping (Littrell & Dickson, 1997). ATOs also serve as the intermediary between consumer and producer. Within this space ATOs must convince consumers of the product value and social benefit while helping producers attain that marketable value and receive that benefit. ATOs must select which producers to work with from an increasing list of Fair Trade producers. The goals of ATOs vary across organizations, however the basic tenant of “social responsibility toward providing income for the world’s poorest artisans is a widely agreed upon and enduring core value” (Littrell & Dickson, 349).
As the Fair Trade movement’s popularity has increased so has the number of ATOs. In order to harmonize Fair Trade standards and reduce the potentially for confusion among labels an internationally independent certification body, Fairtrade Labeling Organizations International (FLO), was created in 1997 by three dominate European ATOs- Max Havelaar, Fair Trade Mark and TransFair (Raynolds, 2002; Ericson, 2002). The FLO coordinates the work of 17 labeling initiatives working in over 30 countries. The FLO sets Fair Trade standards and monitors producer and trader compliance with those standards; as of 2001 the FLO certifies 7 products produced in 30 countries (Ericson, 2002). ATOs not under this umbrella, still market their fairly traded products as they have in the past, however the ultimate aim of the FLO is to develop a single Fair Trade label (Ericson, 2002).

**Role of consumers in Fair Trade:**

The success of Fair Trade coffee, and all other products, depends heavily on the consumers of Fair Trade products. “Fair Trade networks support and are supported by heightened concerns among Northern consumers over global ethics” (Raynolds, 2002: 415). According to Raynolds (2002) 74% percent of Americans believe they have an obligation to ensure safe working conditions for international workers. The buying of food products with the Fair Trade mark has also led consumers to feel that they are purchasing products removed from the industrial agro-food complex, increasing food security and reducing environmental destruction (Raynolds, 2002).

Fair Trade consumers differ from traditional consumers in level of awareness about social and environmental issues and their willingness-to-pay (WTP) more for certified products. Bird & Hughes (1997) have classified consumers of ethically sound products into three categories: ethical consumers, semi-ethical consumers, and selfish consumers. The main difference between these consumers after the amount and rate at which these consumers purchase Fair Trade products was the reason why they purchased Fair Trade products. “The incorporation of ethical components into the bundle of characteristics making up a product means that consumers’ world views can be reflected in their consumption decisions, contingent on both their level of commitment towards an ethical issue and their level of disposable income” (Bird & Hughes, 159). It is this commitment and additional income that
the Fair Trade market hopes to tap into, via consumer education and outreach. The level of commitment of those purchasing Fair Trade products on a regular basis would seem to be high. An important difference between coffee consumers and potential Palm Sunday palm consumers is the rate of consumption. An annual versus a weekly expense may be something a consumer is willing to pay more for because of the annual nature of the purchases.

Through extensive education and outreach campaigns Fair Trade consumers develop skills in differentiating between conventional and alternative products. Not only do Fair Trade products benefit consumers but they offer may consumers the ability to express ethical and political beliefs in addition to providing that “feel good factor” when buying goods (Raynolds, 2002: 415). “The consumption of Fair Trade labeled items, particularly commodities with high symbolic content like coffee, offers an important opportunity for consumers to identify themselves as socially and environmentally conscious individuals” (Raynolds, 2002: 415). Tapping the “feel good factor” by supporting an explicitly ethical, political and social cause drives the Fair Trade consumer to buy Fair Trade products. It is also a means by which “consumers individually strengthen civic and domestic conventions within Fair Trade networks and question the business mentalities and practices that shape mainstream networks” (Raynolds, 2002: 415). It is not only a political act but also a personal one, where consumers are able to connect on a deeper level with people who have produced their goods. Consumers feel their dollars are building partnerships while buying quality products.

“I continue to buy your clothing because every dress, jumper, and skirt brings continual compliments from my friends and strangers alike. The attention is great fun, but what continues to be of greatest importance to me is knowing that my buying power is supporting the effort of others who are working to support themselves. Thanks so much for making a connection between us” (Littrell & Dickson, 1999: 349).

Ultimately the success of Fair Trade depends on consumers and the extent to which they support and believe in Fair Trade ideals (Renard, 2003).

*Role of producers in Fair Trade:*
The partnership approach of Fair Trade implies that benefit flows between producers and consumers. Not only does the consumer promise to seek out higher priced products labeled Fair Trade but also producers are expected to deliver a consistent and reliable product of high quality. On the surface the partnership is often marketed between producer and consumer but in reality the critical relation lies between producers and ATOs (Tallontire, 2000). ATOs are the area where consumer marketing, product development, product quality, and production methods mesh, “It is a marriage of ‘the farmers’ skills and the commercial skills of trading” (Tallontire, 2000:168). The producer must provide the ATOs with reliable and marketable product and the ATO must provide producers markets and profits from product sales. In addition to producing the product, Fair Trade producers, serve as their own poster child for encouraging Fair Trade sales.

In the case of coffee, where quality is critical, it has been essential for new cooperatives to produce high quality coffees; Fair Trade coffee does not expect sales to ride on the label alone. As mentioned above, producers are to be small scale, democratically organized producers that encourage unions, fair wages, safe working conditions, health standards and encourage programs of environmental sustainability and discourages against child or forced labor (Renard, 2003). If producers meet these criteria they are eligible for a Fair Trade label. However

“while Fair Trade has opened up “spaces of inclusion” for small-scale producers, the dictates of “quality” act as an exclusionary force at odds with the relational ethic of the movement. Many producers…may be excluded from the network because of strict quality standards imposed by importers and suppliers” (Goodman & Du Puis, 2002:115).

The competition in global niche markets is heavy, and in the realm of coffee this competition is compounded by the over-supply of Fair Trade coffee. This global market produces

“a new set of demands and complexities for rural producers…These markets, with their concomitant demands for product consistency, quantity, and quality and timely delivery and pressures to adapt to fickle consumer tastes and styles, can pose threats
to community well-being and cohesion, particularly in highly traditional and indigenous communities” (Jaffee et al., 2004: 183).

Producers who can meet such demands and remain flexible will thrive in the Fair Trade market. Although Fair Trade seeks to circumvent issues that arise in conventional trading channels, Fair Trade producers are being confronted by similar if not the same issues conventional producers face. The difference between the two is that one producer network is supported by people willing to help those producers meet such demands, while the other is not.

Certified coffee and conservation:

In addition to Fair Trade, other coffee labels such as shade grown, bird friendly and organic emphasizes environmentally sound production methods. It is not necessary to follow organic, shade grown, or bird friendly growing techniques to acquire the Fair Trade Certification (Philpott & Dietsch, 2003; CEC, 2000). Nor does following them assure Fair Trade certification. Many producers hold both organic and/or shade grown certification and Fair trade certification. Basic Fair Trade certification requirements forbid the use of the ISO “dirty dozen”, 12 pesticides which have been identified as dangerous to human and environmental health (www.transfairusa.org on 1/12/05). Rough estimates place shade grown coffee sales between 1 to 5 % of specialty coffee sales, between $30 to $60 million US dollars per year (CEC, 2000).

Shade grown farming systems have been recognized as “repositories of biological richness for groups such as trees and epiphytes, mammals, birds, reptiles, amphibians, and arthropods” (Moguel & Toledo, 1999: 11). Perfecto et al., (1996) believes that shade grown coffee systems can “contain as much biodiversity as forest habitats” (598). Canopy structure, tree species composition, farm location, and the promotion of corridor affects help create such rich and biodiverse coffee farming systems (Perfecto et al., 1996; Moguel & Toledo, 1999; Philpott & Dietsch, 2003). Philipott & Dietsch (2003) believe that because of these high rates of biodiversity in shade grown systems, stricter shade grown regulations paired with Fair Trade certification will offer alternative means for conservationist to pursue preservation through production.
As coffee prices drop, conversion of shade grown systems to more intensified coffee systems has increased, as has conversion of shade systems to other agricultural activities (e.g. pastures, *milpa*) (Philipott & Dietsch, 2003). Similar to the arguments for a Fair Trade palm certification, higher prices for shade grown coffee may offer an incentive for producers to continue growing shade coffee and to maintain the structure of shade grown systems.

Philipott & Dietsch (2003) ask “what sort of certification process will assure that funds go directly to farmers as an incentive for maintaining shade coffee farms?” One promising way [to achieve this] is to link rigorous shade-certification (i.e. Bird Friendly Coffee) with fair-trade certification, thus meeting the goals of both conservationists and farmers (1845). They go on to state that few conservation approaches link social justice agendas with those of conservation and believe that such partnerships will offer solid steps forward in conservation strategies in coffee growing regions (Philipott & Dietsch, 2003). Empowerment, control of ones labor and ability to earn money, can reduce mounting pressures on marginalized populations and surrounding forest resources. “Commercialization of NTFPs is widely considered to offer a mechanism by which conservation and development goals can be achieved concurrently” (Marshall et al., 2003: 128). The extent to which shade coffee or NTFP can achieve conservation goals and encourage rural development has been a subject of serious debate (Marshall et al., 2003; Philipott & Dietsch, 2003; Rappole et al., 2003). Again finding certification schemes with complementary regulations and goals could enhance the power of labels to achieve greater effectiveness in both conservation and rural development.

The issue of palm sales based on palm quality versus palm quantity has become a critical factor in palm Fair Trade and certification efforts. There have been many issues raised around the general quality of alternative products such as Fair Trade or organic (Littrell & Dickson, 1997; Ericson, 2002). People will not simply pay more for a Fair Trade product because it is labeled as a Fair Trade product thus Fair Trade product quality is expected to be as good if not better than conventional products (CEC, 2002).

Social relations in mediation:

Producers and communities that are willing to participate in the Fair Trade efforts will need to restructure existing social relations and call heavily upon existing social
infrastructures for assistance. In order to “meet the challenge of globalization on their own terms”, they must seek specific markets for their product, using particular traits, either cultural or environmental, as means to gain competitiveness in the Fair Trade market (Nigh, 1997: 428). Nigh (1997) examined the social organization of Mayan organic coffee producers in Chiapas, noting that new and adjusted social relations with international trading and marketing companies were necessary in order to achieve community marketing and production goals. Nigh (1997) also noted that these very same social relations, explicitly with international organizations, delegitimized the organization they have formed due to their association with international organizations. “The organizational structure adopted to achieve this success is a hybrid form of organization that combines aspects of traditional Mayan Indian community democracy with the characteristics of a modern capitalist corporation” (Nigh, 1997: 428). The organizational strategy uses both traditional Indian concepts of reciprocity and democracy in combination with “clearly defined administrative structure and business-like format” (Nigh, 1997: 428). These Mayan communities also rely on outside assistance, referred to as a “cultural broker” or “transnational broker” (Nigh, 1997). It is at this juncture where outside assistance is utilized by producers to counter effects of global marginalization and secure increased producer income. These brokers offer to the communities a means of circumscribing traditional Mexican assistance which is monopolized by the Mexican government and allows communities to engage with organizations or consumers who are their to assist and support these communities in “human rights, securing funds for their project, finding markets for their goods or participating in transnational indigenous political activity” (Nigh, 1997: 434). Together producers and “transnational brokers” are working to take control of the coffee exportation process by creating direct connections to heavily targeted consumer markets. To accomplish direct sales between producers and consumers, producers must guarantee harvesting practices and product quality while the Fair Trade label must secure human rights, socio-economic benefits and better environmental management.

Nigh (1997) also mentions the issue of connecting production methods and consumer demands. In the case of Mayan organic coffee, requirements of certifying agencies have created the need for Mayan producers to “impose strict internal controls on all phases of
coffee production, from the field...to packaging” (Nigh, 1997: 434). Producers are visited regularly by program monitors to check on the process of production while simultaneously providing advice and technical assistance. Each visit is than recorded and entered into a larger computer database (Nigh, 1997). Processing, transportation and packing are strictly monitored so that a labeled coffee bag can be traced to its field of origin. That requires an intense level of organization on the part of producer cooperatives (Nigh, 1997). These “organic methods and the controls established for certification have resulted in an increase in quality of the final product allowing [the supply of some of] Mexico’s highest grade coffee directly to European and U.S. gourmet markets” (Nigh, 1997: 434). It is the hope that the use of a Fair Trade label in palm collection will encourage similar results. Fair Trade offers the mechanism by which consumer demands of socially, economically, and environmentally sound products may materialize. It is the infrastructure by which these demands can be fixed, regulated, and monitored. “Through their purchases and consumption, consumers individually strengthen civic and domestic conventions within Fair Trade networks and question the business mentalities and practices that shape mainstream trade networks” (Raynolds, 2000: 415). It is also through these Fair Trade networks that “farmers seek to position themselves more advantageously in that market by redefining their role as one producer of bulk commodities to that of a skilled professional providing a vital, high quality service in the form of healthy natural foods [or products]” (Nigh, 1997: 435).
CHAPTER 2: A MARKET-CHAIN ANALYSIS OF CHAMAEDOREA PALMS: PROSPECTS FOR FAIR TRADE LABELING

Introduction:

Presently 28% percent of Mexico’s land mass is covered by forest. These forests are home to some of the most biodiverse regions in the world; Mexico ranks 4th among all countries in world biodiversity (Bray & Wexler, 1996; World Resource Institute, 2003). Eighty percent of Mexico’s forested lands are controlled by ejido or comunidades agraria. These people depend on the forest for food and economic resources. Living from and working within these forests has taken a toll on forest health. Deforestation is estimated to occur at the rate of 800,000 hectares per year (Bray & Wexler, 1996). As forest health declines so does the health of communities dwelling within them. Increased need to secure a stable income has forced many people to rely on unstable forest resources for economic opportunities. If conservation and rural development are to evolve together, benefiting both local peoples and the forest, natural resource sales must offer long-term economic returns. This requires the conservation and protection of forests. It has been argued that environmental conservation must be paired with economic development through ‘market-based conservation’ in order to succeed where legislation alone has failed. A similar approach, which encourages sustainable rural development by providing producers with niche markets for food and craft products, is Fair Trade. By offering producers high price premiums through Fair Trade labels, supporters hope to create long-term trade relationships and economic opportunities for producers, while simultaneously promoting sound environmental management.

Chamaedorea palms are an important non-timber forest product (NTFP) of humid tropical forests. These palms may comprise a significant component of the local economy in small villages located near forests where the palms grow. Conversion of forests to agricultural and grazing lands and increased occurrence of forest fires threatens the survival and sustained harvesting of these palm populations, threatening collectors livelihoods.

This research examines Fair Trade in the context of forest conservation and rural livelihood security and development. I examine the question: Can a Fair Trade label improve producer well-being and encourage forest conservation through price premiums? In order to
address this question I examine whether a market exists for and can accommodate Fair Trade palm fronds. If a market is not available (or cannot be created), the Fair Trade label cannot be used to further conservation efforts or aid in sustainable rural development. This paper will examine the feasibility of Fair Trade certification for the Mexican palm, *Chamaedorea*. In addition, this paper examines potential markets for the Fair Trade *Chamaedorea* palm, current and potential supply channels for Fair Trade palms, and the potential impact a Fair Trade label will have on producers and forests.

**Background:**

*Evolution of the Fair Trade and alternative trade movement:*

Alternative trade or Fair Trade makes explicit the social and environmental conditions under which a product is produced, attempting to distinguish alternative products from traditionally traded products through labels at the retail level (Hudson & Hudson, 2003). The goal of alternative trade is to avoid the organization of production and trade around abstract market principles that devalue and exploit poor and disadvantaged workers and the environment (Raynolds, 2000). By working within traditional channels of distribution and with traditional market chain actors such as importers and distributors, Fair Trade has created a space for alternative trade within conventional market mechanisms (Renard, 1999; Murray & Raynolds, 2000). By creating an alternate “reality within the market”, Fair Trade is able to utilize market conventions rather than becoming sidelined by them (Renard, 1999: 90; Murray & Raynolds, 2000).

The Fair Trade movement first began in Europe in the mid 20th century. The United Kingdom, The Netherlands and Germany were the first countries to adopt principles of Fair Trade and are dominant players in the movement today (Ericson, 2002; Littrell & Dickson, 1997). The U.S. based Fair Trade movement emerged in the 1970s and 1980s from the missionary work of the Mennonite Church and Church of Brethren, which began with traded handicrafts in the 1940s and 1950s (Ericson, 2002; Littrell & Dickson, 1997; Littrell & Dickson, 1999). The European Fair Trade market is well ahead of the U.S. market in total sales and product availability. In 2001 European Fair Trade sales totaled U.S. $247 million compared to U.S. $30 million generated in American Fair Trade markets (Ericson, 2002).
The worldwide sales of Fair Trade products grew by 55% between 1997 and 2000, indicating further acceptance, opening, and expansion of markets for Fair Trade products (Ericson, 2002). At present labels exist for bananas, tea, honey, cocoa, pineapples, mangos, rice, flowers, and plants; food products represent 60% of fairly traded products (Raynolds, 2000; Moore 2004; www.maxhavelaar.org). According to Renard (2003), coffee and bananas are the leading Fair Trade products.

The Fair Trade movement, both in Europe and the United States, originated from missionary projects and humanitarian efforts. Missionaries began selling the traditional handicrafts of peoples they were working with, in retail or “solidarity” outlets throughout the U.S. and Europe (Ericson, 2000). The U.S. movement did not begin to expand until the 1970s and 1980s (Moore, 2004). Church involvement in Fair Trade has been witnessed from its inception; church based groups (i.e. missionary groups) are often credited with the creation of the Fair Trade movement (Ericson, 2002; Moore, 2004; Murray & Raynolds, 2000; Raynolds 2002). Fair Trade efforts have also been fostered by the continuous support of church organizations and their Fair Trade buying programs. Littrell and Dickson’s Social Responsibility in the Global Market (1999) examines the structure of alternative trade, the role of Alternative Trade Organizations (ATOs), and producers and consumers within the Fair Trade movement. Of the seven ATOs that helped build the Fair Trade movement, two ATOs are associated with Christian denominations: The Mennonite group (Mennonite Central Committee; MCC) and the Protestant and Catholic organization Sales Exchange for Refugee Rehabilitation and Vocation (SERRV). Littrell and Dickson (1999) present three artisan profiles documenting producers’ success in Fair Trade; two of these groups were heavily supported by church officials from the Catholic and Methodist faiths. Religious institutions have supported the Fair Trade movement and ideas since its inception. As suggested by Littrell and Dickson (1999), the Fair Trade movement may have lacked critical support and drive without church support.

Additional models that have proven successful in alternative and Fair Trade and which are relevant for Chamaedorea certification efforts include certified Fair Trade coffee, certified Fair Trade flowers, Fair Trade bananas, Fair Trade plants and African Palms USA (AP USA); each will be described briefly below.
Fair Trade Coffee:

The most successful fairly traded product has been coffee. In the European Fair Trade market coffee imports are valued at over 300 million dollars and are sold in over 35,000 supermarkets in addition to being served in universities, corporate offices and government institutions (Raynolds, 2002). At the request of organized Mexican coffee producers for equitable access to European coffee markets Mexico became the birthplace of fairly traded coffee. The Max Havelaar seal, developed by the Dutch company in 1988, was formed and today Mexico is the largest exporter of Fair Trade coffee in the world (Jaffee et al., 2004).

In order to acquire and maintain a Fair Trade label for coffee, both producers and importers must adhere to strict standards. To attain Fair Trade certification producers and importers must meet specific standards set by the Fairtrade Labeling Organizations International (FLO). More nuanced regulations are applied in specific instances, but the major regulations applied to Fair Trade coffee importers require buyers to: 1) purchase coffee directly from FLO-approved grower organizations with a long-term buying contract of at least one growing season, 2) guarantee the purchase of coffee at FLO-established prices and pay a premium above the world market price should the price of coffee rise above that establish price and 3) offer financing or credit to contracted coffee producers (Raynolds, 2002). To be included in the FLO registry of Fair Trade coffee producers, producers must: 1) be small family based operations, 2) be organized in democratic association, often co-operatives, and 3) pursue environmentally friendly production goals that preserve natural resources (Raynolds, 2002). Licensing and monitoring of distributors is done by national labeling initiatives (TransFair USA, etc) while producers are monitored and approved by the FLO (Raynolds, 2002).

The aims of these standards are to encourage long-term trade with democratically organized small scale producers, through the shared burden of the cost of production (credit advance based on the future crop to be harvested), the elimination of costly middlemen, and the encouragement of environmental stewardship. Guaranteed prices are set well above the established world market price, so that a fair and consistent wage can be paid to producers, which covers the cost of coffee production and producer labor. Fair Trade standards also
guarantee safe and healthy working conditions and offer producers technical assistance whenever possible. The hope is that Fair Trade creates long-term trade relations between producers in developing nations and Northern traders and consumers. By offering trade, not aid, these organizations strive to encourage sustained rural development and in-country economic growth. Often a portion of the sales from cooperatives with Fair Trade coffee are diverted into a community fund that can than be used to develop local projects based upon specific community needs such as health care, improvements in local infrastructure, and education.

*Fair Trade Flowers:*

Max Havelaar, the first and most established Fair Trade label began selling Fair Trade roses from its Swiss foundation in April 2001. Fair Trade rose sales in Switzerland have grown from 21 million stems in 2001 to 72 million stems in 2003, representing 10% of the retail cut flower market in Switzerland (www.maxhavelaar.org). Currently roses are the only Fair Trade certified flower. The market for Fair Trade certified flowers is present in Europe and Canada; however, the U.S. both lacks certification and a market. The impetus for creating a market for Fair Trade flowers arose from the dangerous working conditions associated with flower production and the lack of workers’ rights on flower farms (Kohler, 2003).

*Fair Trade Bananas:*

Sales of Fair Trade bananas introduced in 1996 have grown rapidly, capturing 20% of the Swiss banana trade (Shreck, 2005). Bananas are the first fresh fruit and perishable commodity to be certified by the FLO, presenting new logistical challenges for the FLO (Shreck, 2005). Due to the perishable nature of bananas, marketing Fair Trade bananas must rely more on traditional market mechanisms and intermediaries than any other Fair Trade product (Shreck, 2005). According to Shreck (2005) these intermediaries and traders are not held to Fair Trade standards as producers are, because such regulations would restrict the volume of Fair Trade bananas sold. Fruit is still subject to strict (conventional) quality controls, resulting in the culling of 50% of bananas during packing (Shreck, 2005). “In effect,
these quality standards institutionalize unequal power relationships between different actors within a commodity chain” (Shreck, 2005: 24). Additional challenges exist in the redistribution of Fair Trade profits from exporter to producer (Shreck, 2005). Exporters are to pass the additional income generated from Fair Trade sales to producers. However, due to a lack of transparency between producers and exporters, in addition to minimal producer understanding of the Fair Trade concept and social standards, little money is returned to producers (Shreck, 2005).

The European and U.S. Fair Trade and certified banana initiatives have diverged greatly in their implementation of initial certification standards and acceptable production practices. The take-over of the banana initiative by Rainforest Alliance in the U.S. has not only altered the means of implementation but the fundamental goals of the initiative. Alternative trade in the United States has been most successful when addressing “green” market initiatives rather than socially oriented initiatives (Murray & Raynolds, 2000). Consumers are most concerned about environmental safety and consumer health associated with alternative products; as a result the organic food sector has had tremendous growth within U.S. markets (Murray & Raynolds, 2000). Thus alternative trade efforts centered on social justice issues have been limited in the U.S. (Murray & Raynolds, 2000). Rainforest Alliance realized that in order to capture larger consumer markets within the U.S., and create changes in banana production that would promote forest conservation, they had to focus consumer attention on the certification of production practices (and subsequent forest conservation) not the social injustices occurring to plantation workers.

As of 2000, the Fair Trade banana initiative in the U.S. had not received certification from TransFair USA (Murray & Raynolds, 2000). Initial certification of bananas was initiated by Rainforest Alliance under their “ECO-OK” and “Better Banana” program. Fair Trade certification of bananas by TransFair USA began in 2004 (Murray & Raynolds, 2000; Horovitz, 2004). The banana programs implemented by Rainforest Alliance were seen first as a certification effort to benefit forest conservation with less focus on social justice issues (Murray & Raynolds, 2000). Of the original nine regulations drafted for the program, 7 had explicit environmental regulations and only 1 vaguely referred to ethical treatment of plantation workers (Murray & Raynolds, 2000). In analyzing the implementation of the U.S.
Rainforest Alliance certification program one will notice the close partnership between large transnational corporations and Rainforest Alliance. Rainforest Alliance believes that working with large companies, such as Chiquita, will bring about more rapid and widespread conservation than working within the framework of Fair Trade certification alone. “Working with the world’s largest banana corporation is part of Rainforest Alliance’s defining strategy of “constructive engagement” aimed at “bridging the gulf between environmentalist and industry” (Murray & Raynolds, 2000). However, even Fair Trade banana efforts have not been able to successfully avoid dealing with transnational corporations as they control key infrastructure and technologies that can not be circumvented when trading perishable fruit products (Shreck, 2005).

**Fair Trade plants:**

According to the Max Havelaar website (www.maxhavelaar.org), several ornamental plants have received a Max Havelaar label and thus Fair Trade certification. Two of the six plants are in the Aracacea, or palm, family. All six plants come from Sri Lanka. The product line was launched March 22, 2004. The palms are only available in two large retail outlets, Migros and Jumbo, located throughout Europe. The plants are also available on line. The plants are primarily used as indoor home decorations.

**African Palms USA:**

In the realm of palm production and trade, African Palms USA (AP USA) stands out as an example of alternative trade steeped in religious and church support. It is also an example of successful coordination between a select consumer group and a capable producer group. African Palms USA was started by Father Talbot, an Anglican priest, in 1965. Father Talbot had served as a missionary in Africa for over 40 years and began selling woven palm crosses in England, made by villagers he worked with in Africa (Rasicot, 2005; P. Martineau, personal communication).

The sole distributor of the African Palm crosses, Father Talbot, doubles as the first quality control point for imported palms. Next year Father Talbot will be stepping down and AP USA will become the sole distributor of the African palm crosses. After crosses pass
inspection they are shipped to the U.S. headquarters in Olney, Maryland. Eighty volunteers at the East Coast office process and ship orders. Processing entails counting, repackaging and shipping palms throughout the U.S. and to overseas military bases.

AP USA sells a total of 1.5 million crosses to 2,300 churches throughout the year. Of these palms 1.2 million are sold specifically for the Palm Sunday holiday. AP USA crosses are also sold to 4 religious supply outlets, which sell 400,000 crosses annually. Communities across Africa are eligible for grant monies from the proceeds of the palm sales; they need only submit an application. From 1965 to 1998 the organization has given away U.S. $1 million in grants of U.S. $5,000 or less. Annually, they awarded U.S. $70,000 to $100,000 in grants. The villages that produced the crosses do not receive any of the profits from international sales directly; they profit only from the initial sale of crosses to the British distributor. However, villages that weave the palms may apply for self-help grants. A designated committee comprised of a diverse group of religious, healthcare, government, and non-government officials choose grant recipients. Grants have been awarded to community projects that address AIDS education and prevention, sanitation, healthcare, vocational training, and housing for orphans.

The North American Center for Environmental Cooperation: The first attempt at selling sustainable palm fronds

With the creation of NAFTA and increased fears that the environments and peoples of North America will be sacrificed for economic gains and free market access, considerable thought has been given to the question of how best to work against free market forces that reek havoc on the environment and people. Will the most effective change come if future initiatives operate within or against the current market system? Does operating within or against the current market system to achieve these changes have an impact on a moral or ethical level? In a world where markets are opening at an accelerated rate and threatening many systems (environment, culture) that are traditionally slow to evolve, people are now seeking quick and dirty solutions for the conservation of such systems, whether it means joining the very market that has encouraged the degradation of such systems, or not. The North American Commission for Environmental Cooperation is an example of an institution
whose principle objective is to examine and support the policies and practices that enhance the co-existence of trade and the environment; specifically, it seeks to provide market solutions.

The North American Commission for Environmental Cooperation (CEC) was created by the signing of the North American Agreement on Environmental Cooperation accord, which was drafted in the hopes of building environmental safeguards into the NAFTA trade liberalization pact. The CEC’s mandate is to investigate linkages between trade liberalization and the environment. It seeks to pursue policies that make trade and the environment mutually supportive through the improved understanding of the relationship between trade, the economy and the environment (CEC, 2000).

In its attempts at fostering conservation and environmental protection through the expansion of the “supply and demand for environmental goods and services,” the CEC has commissioned studies of Mexican and Guatemalan Chamaedorea market chains and production systems (CEC, 2000: 15). This research was the impetus for the creation of a pilot palm project which sought to supply sustainably harvested palms to U.S. churches, a consumer group identified by CEC research as a strong palm market.

Dean Current, a research associate and program manager at the Center for Integrated Natural Resource and Agricultural Management (CINRAM) at the University of Minnesota, has been working closely with the CEC in their efforts to promote trade in sustainable Chamaedorea palms. As a result of the collaboration between the CEC, CINRAM and Current, churches purchased the first 5,000 sustainably harvested palm fronds sold in the United States during the Easter season of 2005 (“Churches celebrate”, 2005). Twenty-two congregations in Minnesota, North Dakota and Massachusetts participated in the “eco-palm” project coordinated by the CEC, Rainforest Alliance and the University of Minnesota’s Center for Integrated Natural Resource and Agricultural Management (CINRAM) (“Churches celebrate”, 2005: 1). Palm fronds were supplied by International Palm Fronds (IPF).

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1 International Palm Fronds is a psuedonym for a interview respondent. The respondent was the owner of a major U.S. foliage and plant import firm.
Palma *Chameadorea*: Current production and market trends:

The genus *Chamaedorea* includes about 100 species of dioecious palms restricted to the understory of neotropical rainforests and cloud forests (Hodel, 1992). World Conservation Monitoring Center has also identified 19 *Chamaedorea* species as endangered (Mont et al., 1994). The three most heavily marketed *Chamaedorea* palms, *C. elegans*, *C. oblongata* and *C. tepejilote*, are not threatened. In the wild there is an abundance of *C. tepejilote* palms, however *C. elegans* and *C. oblongata* are becoming scarce (Mont et al., 1994; Espinoza et al., 2003).

Figure 1. From left to right: *C. tepejilote*, *C. elegans* (immature), *C. oblangata*, the three most heavily traded *Chamaedorea* palms in the international floral and horticultural market.

According to Hodel (1992), Mexico and Guatemala are the two dominant centers of *Chamaedorea* distribution throughout the Americas. More *Chamaedorea* species have been named and identified in Mexico than any other country and the heart of *Chamaedorea* country is in the southern Mexican states of Veracruz, Oaxaca, Chiapas, and Tabasco (Hodel, 1992). The greatest variety of *Chamaedorea* palms and 14 endemic *Chamaedorea* palm species are found in Mexico, making it the world leader in both categories (Hodel, 1992; CEC, 2002). Thirty-eight of the palms in this genus are under the protection of Mexican NOM-059-ECOL-94. (EcCARDI, 2003; CEC, 2002). "NOM-059-ECOL-94 establishes lists of plants and fungi, mammals, birds, reptiles, amphibians, fishes and invertebrates classified as either endangered, threatened with extinction, rare or under special protection. Under Mexico’s legal system all use of and development affecting rare, threatened and endangered..."

Chamaedorea palms are used heavily in the international floral trade. The Chamaedorea palm is used as green filler in large floral displays, ornamentation in religious services, and is a key display in funerals throughout the United States and Europe (CEC, 2002; Wholesaler, personal communication). Chamaedorea palms, or “camedor” as known in the floral industry, are used by florists because of their long shelf life, low cost and ability to add depth and structure to large floral arrangements (CEC, 2002). The estimated total quantity of imported Chamaedorea palms to the U.S. ranges from 300 and 350 million stems per year, while palm sales for the Palm Sunday holiday may represent about 10% of the total annual palm trade, about 30 million fronds, or $4.5 million dollars (“Churches celebrate”, 2005).

In 1999 the estimated value for exported Chamaedorea palm fronds from Mexico was U.S. $20 million, about 2000 tons of leaves (Endress et al., 2004a). According to the CEC (2002) the volume of Chamaedorea sales in the United States has fluctuated over the past 26 years but the long-term trend is stable. The United States is a net importer of cut green products and the decline in domestic green grower cash receipts is indicative of the United States increased importation of Latin American greens (CEC, 2002). The majority of Chamaedorea palms are imported from Mexico, followed by Guatemala (CEC, 2002; Ramirez-Ramirez, 1999). One Mexican website (www.raises.org, 6/15/04) estimated that Mexico supplies 55.34% of internationally traded Chamaedorea palm fronds. However, unlike the cases described above for coffee, bananas, flowers and palm crosses, there are no existing Fair Trade markets for Chamaedorea palm; they are sold palm through conventional market mechanisms. CEC (2002) believes that the Chamaedorea palm offers a unique opportunity where certification and conservation efforts can together address issue of sustainable development and forest preservation. The CEC (2002) has identified Christian congregations as consumers of significant quantities of palm fronds, for use in Palm Sunday celebrations and wedding and funeral floral displays. Potential exists for successful
certification efforts with palms; as a significant consumer of the product, Christian churches, have a long history of Fair Trade and social justice efforts.

Why should a Fair Trade label exist for Palma *Chamaedorea*? The *Chamaedorea* is a popular non-timber forest product (NTFP) that supplements subsistence farmer and peasant incomes in southern Mexico. It is one of 250 NTFPs with high development potential in Mexican perennial and hardwood forests (CEC, 2002). Mexican researcher Fernando Ramirez-Ramirez (1999) believes that decades of *Chamaedorea* extraction have sustained the economies of forest communities and has allowed collectors to recognize the benefits of forest resources and the advantage of maintaining the forest structure, reducing forest loss in collecting villages of Mexico (Rameriez-Rameriez, 1999). Much of *Chamaedorea* is grown in threatened forest habitat and collected in *ejido* and *comunidade agraria* forests. It has an established market and is sold within traditional market channels. Thus, it is a product that has the potential to acquire Fair Trade certification and encourage conservation by becoming a steady economic base for collectors. Identified key buyers of palm fronds, Christian denominations, are supporters of Fair Trade programs and thereby provide a natural conduit for Fair Trade palms. The greater problem to be addressed by a Fair Trade label is its use in the development of stable and diversified rural economies. Secondary to this and resulting as an affect from improving rural community livelihoods is forest conservation.

Valdivia and Gilles (2001) state that the inability of an individual to recover “the benefits produced by [his/her] labor and investment…not only leads to deterioration of human well-being but to losses of bio-diversity, soil, water and plant life.” Here in lies the fundamental problem that makes *Chamaedorea* extraction unsustainable, collectors are unable to recover benefits produced by their labor. They are being undermined of their power and this causes them to turn to unsustainable levels of resource extraction in an attempt to create some level of economic security.

**The Mexican land tenure system and implications for Fair Trade:**

The Mexican constitution recognizes three forms of rural property: *ejido*, *comunidades agraria* and national property (Appendi, 2001). *Ejido* land holdings, most popular in Southern Mexico, are a form of land tenure that grants usufruct management
rights to a specific population of peoples. It is estimated that 9,047 *ejidos* possess approximately 85% of Mexico’s 50 million hectares of closed Mexican forests (Bray & Wexler, 1996; Thoms & Betters, 1998). This amounts to about 17 million people living in forest communities that have direct control over and derive their livelihoods from forest resources. In response to the opposition of large private landholdings (*haciendas*) and the increasing marginalization of sectors of rural Mexico, article 27 in the 1917 Mexican constitution broke apart and re-distributed large private land-holdings. Redistributed lands were granted to indigenous and peasant peoples as *ejidos*, *comunidades agraria* and small private land holdings (to further prevent large land amalgamations). Definitions of the different land types are fuzzy, at best, in Mexico and people often use the term *ejido* interchangeably with *comunidades agraria*; although most people refer to *comunidades agrarias* as communal or indigenous lands. However, fundamental differences exist between the *ejido* and *comunidades agrarias* land tenure regimes that reach far back in Mexican and Spanish history.

A total of 27,252 *ejidos* and 2,194 *comunidades agraria* are designated in Mexico. *Ejidos* were created from agrarian reforms between 1917 to 1992. *Ejidatarios* are granted use rights to plots within the *ejido* community. *Ejidatarios* cannot sell or mortgage parceled lands, but can pass down use rights to family heirs so long as they regularly worked or labored upon the land (Randall, 1996). However lands designated as *ejido*, under community management, are still property of the nation (Appendini, 2001). To be designated as an *ejidatario* a person need only be an adult Mexican peasant living in the *ejido*. A community member can make no decisions on behalf of the community and communal lands, without the title of *ejidatario*. Therefore the *asamblea* and *ejido* governing form is exclusive, allowing non-*ejidatarios* to only voice their opinions without giving non-*ejidatarios* voting powers to determine how the community is to be managed and for whose benefit.

*Comunidad agraria* is also a form of collective land management; however, title to land was given to *comuneros* by the Spanish Crown during the Colonial period (Appendini, 2001). Thus, the community was given legitimate ownership of its lands. Throughout history many *comunidades agrarias* have lost their titles, or more accurately were deprived of them as a result of Liberal land privatization policies (Appendini, 2001). Some *comunidades* have
remained intact from Colonial times. However many titles were redistributed during agrarian reforms between 1917 to 1992 and legally recognized by Presidential Resolutions during 1953-1976 (Appendini, 2001). Many of the inhabitants of these communities are indigenous peoples. Gaining the title comunero is not as simple as the inheritance rule in ejido systems. Community members establish internal rules for membership based on age, sex, presence, community participation and other social norms (Appendini, 2001). Comunidades agrarias generally have more autonomy than ejidos, as they have been granted legal title to ancestral lands and indigenous rights established elsewhere in Mexican constitutional provisions must be respected (Appendini, 2001). Approximately 30% of comunidades agrarias are in the Southeastern section of Oaxaca (Appendini, 2001).

Prior to 1992 agrarian reforms ejido and comunidades agraria lands could only be collectively managed for the benefit of all community members and utilized only by community members. Community lands are used for grazing, resources extraction, home sites, or town centers.

In order to combat slow economic growth in Mexican farm and forest sectors, 1992 reforms to Article 27 of the Mexican constitution have emphasized a policy that encourages the adoption of full property rights for ejidatario and comuneros plots as well as awarding lands to non-titled community members. This allows previously federally owned collective lands (i.e. ejido) and collectively managed community titled lands (i.e. comunidades agrarias), to be privatized, and with legal title being assigned to any comunero, ejidatario, or other community member. The Mexican government created this policy in order to grant land “security” to those ejidatarios, whose lands were on “loan” from the government. Comunidades agraria were also encouraged to identify, clarify and title community lands. The 1992 Mexican reforms hope to encourage the flow of capital and private investment into rural Mexico by creating lands that can now serve as credit for farmers and allow the possible privatization of valuable forest sections (Randall, 1996). The reforms to article 27 have fundamentally changed the character of ejido and comunidades agraria systems by allowing the privatization of previously communal lands. Such measure have put an end to land redistribution and opened vast agricultural land markets throughout Mexico. Mexican reform encourages ventures with private capital, ultimately hoping that external capital investment in
rural communities will facilitate rural development and modernize (i.e. increase lumber production, increase crop production) forest and farm sectors in those areas (Merrill, 1996).

The rhetoric supporting land privatization in Mexico is the belief that free market mechanisms are the best tools for conservation of land, forests and water (Bray & Wexler, 1996). This begs the question: Will ejidos and comunidades better manage lands for private benefit or community benefit? In 1993 Mexican officials launched an ambitious campaign, PROCEDE, Program for the Certification of Ejido Land Rights and Titling of Urban House Plots, to encourage the recognition of ejidal property, the right to individual plots, and give title to house plots (Appenidini, 2001). PROCEDE began first in 1993 with ejido communities and in 1998 with comunidades agrarias. Thus fewer comunidades, in proportion to the time invested, have converted to the private system. As of 1999, 84.37% of Mexican ejidos have been incorporated into the PROCEDE program compared to the incorporation of only 34.32% of comunidades agrarias (Appenidini, 2001). Just because title is granted does not mean that management of collective lands is eliminated, in fact PROCEDE has promoted the use of previously constructed social regulatory system in ejidos, asembleas etc., in conflict resolution and land management (Appendini, 2001). The decision to recognize the boundaries of individual plots is guaranteed; however, what is of critical importance is the way in which communities choose to manage remaining “commons” and the rate at which communities are gaining title. Inheritance rights have also been changed and ejidatarios can bequeath land title to anyone they so chose, which has potential to disrupt households and other traditional social relationships.

Critical to the debate about Fair Trade palm and forest conservation is the manner in which forests will be managed post-PROCEDE incorporation. Article 27 states that forested lands held by a community are not subject to subdivision and privatization; they remain communal property (Bray & Wexler, 1996). However 1992 reforms encourage ejidos and comunidades agrarias to participate in joint ventures with external capital (private investors). The expectation is that outside investment in forested ejido or comunidad agraria forests will stimulate capitalization and thus modernization and competitiveness of timber production in Mexico while simultaneously encouraging the development of rural Mexico (Bray & Wexler, 1996; Appendini, 2001). These joint ventures often generate unequal partnerships between
community and company, whereby communities relinquish some controls over their lands in order to remain attractive to outside investors (Bray & Wexler, 1996).

**Study systems:**

*Palm collecting communities in Oaxaca, Mexico*

Communities located in two different palm producing regions in the state of Oaxaca, Mexico were identified for this study, with the goal of assessing the local market chain and producer constraints and opportunities for accessing Fair Trade markets. The first study region is located near tropical montane cloud forests that support a high abundance and diversity of *Chamaedorea* palms in the Chimalapas Mountains in the southeastern corner of Oaxaca. Research was conducted in two rural communities, Benito Juarez and San Antonio, both belonging to the municipality of San Miguel Chimalapa. The Chimalapas, encompassing a total of 590,993 hectares, is recognized as one of the most biodiverse regions in the world and is a center of diversity for Mesoamerican plants species (www.worldwildlife.org 1/15/05; Asbjornsen et al., 2005). More than 13,000 Zoque Indians inhabit the two municipalities of the Chimalapas, in addition to people from at least seven other ethnic groups (e.g., Tzotzil, Chinantec, Zapotec, Mixtec) (Morales, Schibli & Bahena, 2001, Teresa, 2001). The principle cause of deforestation in the region is the process of colonization and illegal extraction of forest resources resulting in anthropogenic forest fires, agrarian conflicts, and out-migration, which are compounded by externally driven globalization processes (Morales, et al., 2001; Fonseca & Barrera, 2001). In 1998, an El Niño year in which the Chimalapas experienced extreme droughts, severe forest fires affected an estimated 210,000 hectares of forest in the Chimalapas region, of which approximately 38,000 hectares occurred in tropical cloud montane forests, representing 60% of its original extent (Asbjornsen et al., 2005). The majority of the fires originated from escaped anthropogenic fires (Asbjornsen et al., 2005). The communities of Benito Juarez and San Antonio, which are located at the periphery of these montane forests and depend on many forest products (including the *Chamaedorea* palms) for their livelihoods, were strongly impacted by these fires.
Figure 2. Map of Oaxaca and location of research sites. Research sites are identified by smaller striped boxes. San Juan Río Manso is located in the Sierra Norte, noted by intersecting lines.

A single dirt road connects the two communities of San Antonio and Benito Juarez to lowland areas. In periods of heavy rains, access to both communities is often impossible. The closest city is Juchitán, located about 100 miles away. The dominant language and culture of the region is Zoque, and land tenure is communal (i.e. comunidades agrarias and not ejido). The municipality of San Miguel Chimalapas has a population of approximately 8,000 inhabitants, while the population in San Antonio and Benito Juarez is about 317 and 350, respectively. San Antonio has 196 people that participate in some form of economic activity, while Benito Juarez has 206 economically active people. Palms can be collected from 4,369 ha of land, to which both communities have access. Other important economic activities include logging, crop production (especially tomatoes), harvesting of NTFP, and cattle grazing. Benito Juarez and San Antonio have had provisional permits since April 6, 1981 for timber extraction.

Both Benito Juarez and San Antonio communities refer to the people’s general assemblies or community assemblies as the highest authority in the region. Decisions that affect the community are made based on open discussion at the asemblea general (general assembly) and confirmed by a consensus of community members in attendance. Community
members who attend assemblies are generally men with registered communal rights; few women participate in this process. Elected community officials (which do not hold a formal political affiliation) can make no decision without a signed community act. The assemblies meet monthly to discuss community issues.

The third community included in this study, Nuevo San Juan Rio Manso, is located in the Chinantla region of northern Oaxaca, in the county of Jocotepec. Nuevo San Juan Rio Manso is a ejido community. The region of the Chinantla, in which Nuevo San Juan Rio Manso is located, is defined as the territory currently inhabited by the Chinantec people. Within the region there are 258 settlements in 14 counties occupying an estimated land area of 4,598 km² (INEGI, 2001). The main crops grown in the Chinantla region are corn for home consumption and coffee for export; together these crops occupy 83.4% of the land (INEGI, 2001). According to health and living standard indicators, the entire region of the Chinantla displays relatively high levels of marginalization (INEGI, 2001). According to the Indigenous People Profile of Mexico (2000), three forest products are extracted by local peoples of this region: timber, Chamaedorea palm, and barbasco. Barbasco is a wild yam harvested for use in pharmaceutical products such as hormone replacement therapies. Approximately 19% of the households in the Jocotepec county extract Chamaedorea palm while 44.9% of households in the neighboring county of Ayotzintecpec depend on Chamaedorea extraction for some of their income. The town of Nuevo San Juan Rio Manso, which will be referred to as Rio Manso hereafter, is comprised of 985.57 hectares of ejido lands. The nearest city of substantial size is Tuxtepec. The village is comprised of 55 people, 28 of whom are entitled as ejidatarios (both men and women), of which 12 are palm collectors (men only). Community assemblies are held on a monthly basis. Within this forum all decisions affecting the community are discussed and ratified. About half of the assemblea attendants are women, whom are very vocal and influential in the decision making process.

Palms are collected from wild forest populations; entry into the forest is about a five minute walk from the town center. Over 800 hectares of Rio Manso’s land is suitable for palm harvesting and thus travel to palm plants in the forest can be of considerable length. The forest is dominated by C. tepejilote, the least economically valuable Chamaedorea species sold on international markets. Two other internationally traded palms grow and are
collected in Rio Manso, *C. oblangata* and *C. elegans*. The men of Rio Manso have constructed an access trail into the forest and palm habitat. The trail was built in the summer of 2004 to create a safe access point into the forest, so that palms are easier to harvest and carry home. Subsistence agriculture farming (corn) and aquaculture (tilapia) supplement income generated from palm collection. Four women within the village sell large tortillas, called *tlayudas*, in neighboring communities and city markets. Additional income is generated from cavern tours given to local and international tourists. Rio Manso is currently in the process of developing an ecotourism program, which includes conserving specific forest sections in order to rehabilitate and encourage the expansion of a local monkey population. In addition, they are working to reintroduce a local crocodile species to the river that passes alongside the village.

In its conservation and restoration efforts, Rio Manos is working with the local NGO *Consultorios y Servicios Agroambientales, A.C.*, (CONSERVA). The general project coordinator for CONSERVA is Albar Ríos-Sánchez, who also served as my main contact person and local guide when working with the communities. Rio Manso has also worked with numerous outside research and education institutions. Last year, 24 outside institutions worked in and held workshops within the boundaries of Rio Manso. Due to the heavy investment in time these interaction require Rio Manso is beginning to limit its partnerships and contact with such institutions, reducing the number to about 5 and keeping Río-Sánchez as their main contact and consultant.

*Chameadorea palm suppliers in the USA:*

In order to assess the more popular venues of palm sales within the United States a variety of suppliers were selected for interviews. Two floral wholesalers, one Religious Supply Outlet (RSO) and one retail floral outlet were selected for face-to-face interviews. Additionally, a telephone interview was conducted with a representative from African Palms USA. These suppliers represent the majority of venues through which consumers in the U.S. have access to palm fronds or other palm products that are used in Palm Sunday celebrations. Some suppliers, such as the RSO and African Palms USA, cater specifically to church audiences while the others cater to the general public.
No suppliers I interviewed produced their own palm; they sourced it from external producers. The outlets varied in scale, volume of palm fronds and blades sold and type of palms supplied. The RSO’s and AP USA did not sell *Chamaedorea* palms; all other suppliers I spoke with did. They also varied in corporate business structure, ranging from corporate franchises to non-profit organizations. Suppliers were located in California and Iowa. These states represent regions within the U.S. with strongly contrasting market structures, cultures, and agricultural production systems. For example, California is home to more producers of cut cultivated floral greens than Iowa. According to a USDA survey (2005) conducted on floriculture sales for U.S. greenhouses and nurseries, California sales of cut cultivated greens for operations with $100,000+ sales are estimated to value $12,124,000. In California 32 producers grow floral greens, while there are no such growers in Iowa (USDA, 2005).

Obviously climate conditions favor the production of floral greens in California, however such production also increases the awareness of product management and use for non-specific cultivated cut greens in Californian suppliers.

However the cultural and political differences of the two regions have served as interesting points of comparison. California is home to both TransFair USA, the only 3rd party certifier of Fair Trade products in the U.S., and Global Exchange, an active human rights organization that supports and promotes Fair Trade principles and products. The TransFair USA website (2005) lists over 579 outlets in California where Fair Trade products can be purchased, compared to 22 in Iowa (http://www.transfairusa.org, 4/3/05). According to the U.S. Census Bureau (1999) California is comprised of 59.5% white persons, with a Latino/Hispanic population of 32.4%, while 26.2% of the population is foreign born. Iowa is comprised of 93.9% white persons and 2.8% Latino/Hispanic persons, with 3.1% of the population as foreign born (U.S. Census Bureau, 1999). Presidential elections for the past ten years, in both states, have gone to democratic candidates, excluding the 2004 election campaign were Iowa went to the Republican presidential candidate (http://www.sos.state.ia.us, 5/8/05).
Chameadorea palm consumers in the USA: Churches in the West Coast and Midwest

Eight in-depth interviews were conducted on the West Coast of California. Interviews were conducted in Los Angeles, San Diego, Orange, Santa Cruz, and San Francisco Counties. Church membership ranged from 125 to 4,200 members. Interviews were conducted with 3 Catholic, 1 Episcopal, 1 Lutheran, 1 Methodist, and 2 Presbyterian churches. Churches were located both in large urban centers and suburbs surrounding these centers. All churches were located within 2 to 55 miles of the Pacific Ocean.

Six interviews were conducted in Iowa: in Story, Polk, and Johnson counties. Church membership ranged from 180 to 2,175 members. Interviews were conducted with 1 Catholic, 1 Episcopal, 2 Lutheran, 1 United Church of Christ and 1 Assembly of God church. Churches were located both in urban centers and suburbs surrounding these centers. Three churches in Iowa were located near universities and noted having large populations of transitory student members.

Methodology:

Palm collecting communities in Oaxaca, Mexico:

A field visit to palm collecting villages in the southeastern state of Oaxaca was conducted between May 2004 and July 2004. The main purpose of my visit was to identify major questions related to local producers’ use of and access to international palm markets and to gain a better understanding of key ecological issues related to palm collection. Three formal interviews were conducted with male palm collectors from the Rio Manso community. An informal interview was conducted with Abel Toledo-Mendez, the community leader of Rio Manso. One informal interview was conducted with an independent regional palm intermediary of the Chinantla region. Multiple discussions occurred with governmental officials from the Secretaría del Medio Ambiente, Recursos Naturales y Pesca (SEMARNAP), the Comisión Nacional Forestal (CONAFOR) and non-government officials (World Wildlife Fund). Further, I established a working relationship with Albar Ríos-Sánchez from the Oaxacan NGO CONSERVA. I also established working relationships with Zeniado Garnica-Sánchez from the Comisión Nacional Forestal (CONAFOR). Ríos-Sánchez provided vital information about the Chimalapas communities and Oaxacan forest practices
in general. I was also able to form a working relationship with Jose Luís Arias, a local forester. Arias assists with the development and implementation of strategic management plans for forest systems within rural communities. He also writes the technical reports to be submitted with applications for palm collection permits. In addition, other informal interviews and discussions occurred with local community members from both the Chinatlas and the Chimalapas. Multiple field visits were taken to palm production systems within the surrounding region of Rio Manso. I visited one *Chamaedorea* palm plantation, where we spoke with local *ejidatarios* working the plots and the plantation manager. I also visited the wild collection sites within the forests surrounding Rio Manso.

**Palm suppliers: Intermediaries between the producers and consumers:**

Interviews were conducted with *Chamaedorea* suppliers from the U.S. in order to identify their palm sources, determine the requirements for palm processing and gauge the level of knowledge suppliers have of palm production and certified floral products. Four face-to-face interviews occurred with suppliers. Two interviews were conducted with floral wholesalers in Southern California. An additional interview was conducted with a local floral outlet in Ames, Iowa. A final interview was conducted with a Religious Supply Outlet (RSO) in Iowa. All suppliers interviewed bought and sold *Chamaedorea* palms, except the RSO, which worked with other palm species but not with *Chamaedorea*.

The following three questions were tested throughout my interviews with suppliers:
1) Are processing requirements different for different suppliers within the market chain, and if so, in what ways? 2) Can existing supply houses accommodate Fair Trade palms, given current processing requirements and market conditions? 3) Will factors such as low price, low product demand, and low levels of supplier and consumer awareness of organic and Fair Trade floral products limit supplier participation in a Fair Trade palm initiative?

The interview questions (see Appendix D) were specifically designed to obtain information about the following indicators: 1) Current level of palm processing, 2) Knowledge of certified and floral production and products, 3) Profits from palm sales.

The first indicator will enable me to estimate how future Fair Trade certification requirements may impact the workload and management of palm for suppliers. The second
indicator will enable me to assess the suppliers’ level of participation and concern for certified floral products and production practices. Finally, the last indicator will allow me to calculate and compare current and projected profits from a variety of palm sales (direct to consumer or in floral arrangement). Pricing information can also be applied to estimate the projected increase in certified palm to consumers.

I had informal interviews and email correspondence with a major U.S. palm and foliage importer, International Palm Fronds (IPF).

Palm consuming churches in the USA:

Interviews with churches were focused on three areas: palm use, palm sources and supply, and church participation in environmental programs. Research was conducted in the form of 14 face-to-face interviews and 1 phone interview with church representatives. The main questions addressed were: 1) How critical it is to use palm fronds when celebrating Palm Sunday? 2) Are churches with existing environmental programs more likely to support the Fair Trade label compared to those that do not participate in any environmental programs? 3) How do variations in palm use affect qualities desired of palms by those using palms?

Interviews. Churches included for the face-to-face interviews were selected from a master list (see written mail survey section) and other supplemental religious databases. Due to geographical constraints not all churches interviewed were identified in the master list. Three screening questions were applied to churches before they were selected for interviews: 1) Does the congregation use palm fronds in the celebration of Palm Sunday? 2) If so, where are those palms sourced? 3) Does the congregation participate in any environmental programs? If the response to the first question was positive, I continued with the next questions, otherwise that particular congregation was eliminated from the potential interview population. If the answer to question 2 was not one of three pre-identified main supply channels (local florist, wholesaler, religious supply) that congregation would not be considered further. I selected churches that did and did not participate in environmental programs. I was careful to select both churches with and without environmental programs to maintain a balanced sample. Not all churches interviewed used Chamaedorea palms in
celebrations. However, it was important that all interview respondents used some species of palm. All churches interviewed in California supplemented their purchased palms with palm fronds cultivated by local people reflecting the favorable climatic conditions for palm growth in California. This was not the case for churches in the Midwest.

In order to test the 3 questions presented above I chose 3 indicators, one for each question. Information measurable for these indicators would provide a common baseline of data uniformly obtained from all respondents, which would then be supplemented by additional questions and information emerging during the interview process. The indicators assessed were: 1) Level of reliance on palms for the celebration of Palm Sunday, 2) Level of awareness and participation in environmental programs, 3) Variation in and type of palm uses.

The degree to which churches depend on palms when celebrating Palm Sunday determines how critical palms are in the celebration of Palm Sunday. The level of awareness and participation in environmental programs would be used in an attempt to draw a correlation between established environmental programs in churches and the likelihood of current or future participation in Fair Trade efforts. Finally, variation in palm type used and methods of use would allow me to draw connections (if they existed) between patterns of use and desired product performance and subsequently the qualities demanded of palms used in Palm Sunday (see Appendix C. for complete list of interview questions).

*Written mail survey.* Responses obtained from the interviews enabled the identification of specific areas of importance and emerging patterns, which formed the basis for developing the written mail survey. A total of 350 surveys were sent out nationwide (see Appendix B. for the complete survey instrument).

Surveyed churches were selected from a master list comprised of churches nationwide, previously complied for another research project conducted by Dean Current from the University of Minnesota (currently the results are unpublished). Eight Christian denominations were represented on the master list by 797 churches. The original list was created by selecting the eight largest Christian denominations in the United States, based on the number of congregations associated with a denomination. The eight denominations (in alphabetical order) included: Assembly of God, Baptist, Catholic, Episcopalian, Lutheran,
Presbyterian, United Church of Christ and United Methodist churches. The master list of churches had numbered churches from 1 to 797. Churches were grouped under denominational headings, in no specific order. The number of congregations listed for each denomination was not equal. A total of 350 churches were selected to receive a survey from the master list. Predicting for a 50% response a sample of at least 300 respondents was necessary. In order to facilitate a higher response the address of 50 additional churches were added to the sample pool. Churches previously assigned odd numbers were pulled from this master list. The total of odd numbered churches pulled from the list was 398. Of those 398 potential respondents 28 had incorrect or incomplete addresses and were eliminated from the sample pool. The remaining number of potential survey respondents was 370. Therefore 20 addresses were eliminated from the list of 370. Churches with the largest number of congregations were identified in order to pull additional church addresses. Catholic, Baptist and Methodist lists were reduced by 8, 6 and 6 addresses respectively. Not all survey respondents purchased *Chamaedorea* palms. If the church did not use any palms during Palm Sunday they were asked to return the survey uncompleted, otherwise it was to be assumed that all survey respondents used palms in Palm Sunday services.

Surveys were constructed and administered based on the Dillman (1978) *Total Design Method*. Due to time constraints I reduced the time frame in which the survey was administered, but followed the recommended number of mailings set forth in Dillman’s (1978) *Mail and Telephone Surveys* book. A total of 4 mailings were sent out. The first survey and cover letter was sent on March 28, 2005, the Monday following Easter Sunday. A follow-up postcard was mailed exactly one week later, reminding people of the survey and asking them to return it as soon as possible. The third mailing contained a cover letter and another copy of the survey; it was mailed three weeks after the original mailing. A final reminder postcard and invitation to obtain a replacement copy of the survey if necessary, was sent 5 weeks after the original mailing.

The survey received a return rate of 22%. Twenty-three surveys were returned because they were unable to reach the address or identified respondent. Therefore, the survey sample was reduced to 327 potential respondents, however this reduction in sample size did not affect the overall response rate. Surveys were sent out 5 days before Pope John Paul the
II passed away and 27 days prior to the inauguration of Pope Benedict the XVI. Surveys were also mailed and received the week following the busy lent season. Both of these events may have contributed to the low response rate obtained.

*Data Interpretation.* The Kendall’s Tau-b statistic was used to analyze the correlation between: 1) Church participation in outreach programs and participation in Fair Trade, 2) Church participation in environmental programs and participation in Fair Trade, 3) Church participation in Fair Trade and willingness to pay more for a sustainable palm product, 4) Church participation in outreach programs and interest in buying a sustainable palm product 5) Church participation in environmental programs and interest in buying a sustainable palm product.

The Statistical Package for the Social Sciences (SPSS) was used in the analysis of survey data. Descriptive and inferential statistics were drawn upon in analysis and inference.

Table 1. Sample survey questions designed to measure research indicators.

<table>
<thead>
<tr>
<th>Indicator 1: Reliance on palms</th>
<th>Indicator 2: Environmental awareness and participation</th>
<th>Indicator 3: Type and use of palm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q11. How significant is the role of the palm frond in Palm Sunday festivities? (Circle number) 1. CRITICAL 2. VERY IMPORTANT 3. IMPORTANT 4. NOT IMPORTANT</td>
<td>Q1. Is this congregation involved with any environmentally oriented programs such as recycling, clean-up efforts, etc? (Circle number) 1.YES 2. NO (Go to question 4)</td>
<td>Q7. What are palms used for in Palm Sunday services? (Circle all numbers that apply) 1. REENACTMENTS 2. CHILDREN’S ARTS AND CRAFTS 3. PROCESSION ORNAMENT 4. CONGREGATION MEMBER ORNAMENT 5. DECORATION 6. SERMON TOOL 7. MEDIUM TO CONVEY A MESSAGE 8. OTHER, please specify:</td>
</tr>
<tr>
<td>Q9. How did the bad palms affect the congregation’s ceremony? (Circle all numbers that apply) 1. COULD NOT USE PALMS 2. HAD TO SUBSTITUTE OTHER PLANT MATERIAL 3. COULD NOT BURN FOR ASH WEDNESDAY 4. NO DECORATIONS INSIDE CHURCH 5. OTHER, please specify:</td>
<td>Q3. Could you please describe the processes that lead your congregation to become active in environmentally oriented programs?</td>
<td>Q10. What part of the palm is used in service celebrations? (Circle all numbers that apply) 1. ENTIRE FROND 2. SINGLE BLADE CUT FROM FROND 3. BOTH 4. OTHER, please specify:</td>
</tr>
</tbody>
</table>

**Results & Discussion:**

Despite the importance of *Chameadorea* palms in Mexico and the apparent potential for and advantages of developing a Fair Trade market for the palm, little information exists
about the socio-economic factors influencing palm production within Mexico, where most palms are harvested by small-scale farmers from remote forest sites. Further, the possibilities for enhancing social and ecological sustainability in *Chamaedorea* palm production through Fair Trade certification also remains poorly documented and understood. The major objectives of this study were, first, to determine what (if any) are the major bottlenecks from the producer end in accessing and successfully participating in Fair Trade markets, and second, whether enough interest and incentives exist on the supplier and consumer end to create and sustain a Fair Trade market for the palm.

This section will begin with a description of the palm market chain, beginning in Mexico with producers and ending in the United States with consumers. The integration of additional resources, such as the CEC 2002 study of the *Chamaedorea* market chain, Mexican research of the *Chamaedorea* market chain and personal communications with producers, consumers, suppliers and other institutional figures have brought about a more complete picture of the market chain. Based on the information obtained in this section and applied to the analysis of a future Fair Trade market chain I was able to identify critical opportunities and impediments that should be addressed when developing a Fair Trade palm market.

The opportunities and impediments identified will be discussed in separate sections following the description of the palm market chain. In the opportunity section I will discuss the critical relationship between an emerging Fair Trade palm initiative and churches with active social outreach programs. In addition I will examine the best strategy in expanding this relationship. I will follow this discussion with an example of one congregation that participates actively in social outreach programs and their attempt to support alternative palm trade.

Following this section I will highlight and discussion five major impediments to creating and accessing Fair Trade palm markets. I will explain how these impediments should affect producers and suppliers and their ability to access and participate in Fair Trade markets. Incorporated into the analysis of each impediment are suggestions for overcoming the specific problem and subsequent issues that may result from these problems.
Chapter 3 follows addressing additional opportunities and strategies for developing a future Fair Trade palm market and my concluding remarks.

The market chain: From forest to altar

The Oaxaca link: From forest to freight:

*Chamaedorea* palm production has long been part of the globalized economy. However, as the chain grows to even greater international levels, actors become separated not only by language and borders but also by the need to secure the bottom line. In order to circumvent the effects of product management directed solely by monetary return, improved connections must be made between local spheres of influence such as production and consumption. Of critical importance is improving the connection between Mexican and U.S. market chain actors. Such connectivity could enhance actor accountability and improve market feedback and signals from other areas of the chain.

Overall the market chain for *Chamaedorea* palms is relatively simple. Although little processing is required, multiple people participate in the transport, processing and selling of the palms. Palms are collected either by individuals or large contracted groups (CEC, 2002). Once harvested, the palms are stored in cool shaded areas in the villages without refrigeration. Depending on the village location, a *coyote* will arrive 1 to 3 times a week to buy the cut fronds from villagers. A coyote is the first intermediary that buys palm fronds directly from palm collectors inside the collecting village. The coyote, almost always a man, travels to a number of collecting communities buying palms and transporting the palms to the next intermediary in the palm market chain. If during his inspection of the collectors fronds the coyote finds more than a few “bad” leaves in a bunch he will discard the group and not pay the collector for his efforts (A. Ríos-Sánchez, personal communication). Coyotes will travel along designated palm routes collecting palms from multiple villages by truck. Trucks used by coyotes are not refrigerated. Coyotes may either work independently or be contracted by export companies (CEC, 2002; A. Ríos-Sánchez, personal communication). Once the coyote has gathered enough palms, he then sells the fronds to a regional intermediary (A. Ríos-Sánchez, personal communication). Regional intermediaries buy palms from several different coyotes on a daily basis. Although regional intermediaries do little processing, they
will inspect palm bundles to make sure quality is high. If, like the coyote, they find a few bad leaves in a bundle they will discard the bunch and pay the coyote nothing. When regional collectors have bought enough palms to warrant truck transport, the regional intermediary will send the palms to a neighboring city, where palm exporters will do the bulk of processing, sorting, and packing (CEC, 2002). Palms are then exported under refrigeration from that city to destinations within United States and Europe either by semi-truck trailers, boat, or air.

Below I provide an analysis of the market chains for the two communities addressed by this study. The market chains of the two research sites differ by degree of complexity. Due to difficult access to communities within the Chimalapas, more actors are employed in the market chain, resulting in increased complexity of contracts and negotiations and often leading to an increased number of problems for communities.

The Chinantla region: Espinoza et al. (2003) estimated that 5 actors participate in the market chain between Mexico and the United States, Espinoza et al. (2003), outlined the market chain for the Tuxtepec region (see Figure 3), which is the same market chain that the Rio Manso community feeds into. Coyotes travel along 3 routes to collect palms in the Chinantla (A. Ríos-Sánchez, personal communication). Collectors can be paid either by the gross, 144 fronds, or 12 frond bundles. Coyotes pay about 10 pesos for a gross of C. elegans and 7-8 pesos or for a gross of C. tepejilote (A. Ríos-Sánchez, personal communication). Coyotes will then travel to the warehouse of a regional intermediary where they can sell the palms. Regional intermediaries buy the same gross of C. elegans and C. tepejilote from coyotes for 12 pesos. Coyotes immediately earn 4 to 2 pesos, acting as middlemen between collectors and intermediaries. The regional intermediary than sells the grosses to Hoja Verde, the Mexican counterpart of International Palm Fronds, for 14 pesos. The regional intermediary with whom I spoke bought grosses of 144 leaves, but sold them to Hoja Verde in grosses of 90 leaves. This means that the intermediary must re-bundle the 54 extra leaves from every 144 count grosses and sell them to IPF for an additional profit. Thus this intermediary alone profits from the lower gross counts bought by IPF; these profits are not returned to previous links in the chain (e.g. collectors). The exporter in Tutexpec, Hoja
Verde, will sort, grade, and ship the palms to International Palm Fronds in Texas (via semitruck) or Miami (via air).

The five actors noted by Espinoza et al. (2003) in the Tuxtepec market chain (see Figure 1 below) are: 1) the collectors, 2) the local buyer or coyote, 3) the warehouse in Tuxtepec, 4) the importer (International Palm Fronds) and 5) the consumer. However, I observed an additional link, what I refer to as the ‘regional intermediary’ outside of Tuxtepec, between points 2 and 3. These regional intermediaries bought the fronds from coyotes and sold palms to the regional warehouses in Tuxtepec. I also believe there are more links between International Palm Fronds and consumers, points 4 and 5, than shown in Espinoza’s (2003) chain. The owner of IPF, S. Bailey, explained that the company did not sell palms directly to the general public. After palms arrive in the United States from Tuxtepec, they are distributed by IPF to the wholesalers which then ship to retailers, and finally consumers.

The CEC’s (2002) illustration (see Figure 5) depicts these linkages in the market chain. The replicated CEC (2002) figure is an illustration of the potential linkages and pathways a palm may travel when traded between Mexico and the United States. I have also constructed a similar figure (see Figure 4) based on my own observations, explicitly detailing the market chain for the palms sold by Rio Manso.

The Chinantla chain differs from the Chimalapas chain in that it is dominated by one exporter, which also cultivates its own palm fronds. Hoja Verde is a legal representative of the U.S. based company International Palm Fronds. A local Mexican has been working with the company for over 34 years and acts as their liaison in Mexico. This same person also runs the Hoja Verde farm operation. Hoja Verde is the only buyer and exporter of wildly harvested *Chamaedorea* in the Chinantla region, although in the past there have been three buyers (Espinoza et al., 2003, CEC, 2002; A. Ríos-Sánchez, personal communication). Hoja Verde will supplement 50% of its export shipments with its own cultivated palms, while the other 50% comes from palm intermediaries (CEC, 2002). Palms exported to Canada or Europe are directly exported from the Hoja Verde farm. IPF ships to its distributor in Frankfurt, Germany, which handles European sales (S. Bailey, personal communication).
In the Chinantla region, approximately 2,000 grosses of *C. elegans* and 1,500 grosses of *C. oblangata*, are sold each week (CEC, 2002).

According to Bailey, owner of IPF, *Chamaedorea* shipments from the Tuxtepec region to Europe have decreased by 40% in the past 15 years. Bailey also estimates that orders from IPF for U.S. markets have dropped by 70%. The price he has paid for palms has fluctuated by only about 6% in the past three decades. He is able to keep his buying price high by lowering the number of stems bought in a bunch and paying collectors in dollars rather than pesos. Bailey’s gross count has been lowered from 144 stems to 90 stems a bunch. According to Bailey, IPF is no longer making money from *Chamaedorea* sales, nor is the Mexican counterpart of Hoja Verde. The reduction in palm prices, export volumes and the reduced numbers of exporters paints a bleak picture for palm producers of the region. If IPF pulls out from the Tuxtepec region there will “not be much more exporting to the U.S.” (S. Bailey, personal communication). Bailey is personally dedicated and motivated to working with the certification initiatives and was the palm supplier for the “eco-palm” pilot.

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**Figure 3.** Adopted from Espinoza et al., 2003. Graph of the *Chamaedorea* market chain in the region of Tuxtepec Oaxaca, Mexico.

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The Chimalapas region. The villages of San Miguel Chimalapa are located deep within the Chimalapas mountains. One access road leads to the communities and in heavy rains it quickly becomes impassable. Greater effort goes into the coordination of palm sales in the Chimalapas because of the remote location. Palms are transported from the villages by truck, which are operated by an intermediary buyer who maintains a warehouse in Juchitán. Palm collectors must pay transportation costs for the truck. A minimum of 700 kilos of palm fronds are needed to cover transportation costs. One community member accompanies the palms to the warehouse, where sorting and grading occur. Palms are sorted and graded according to the warehouse quality standards. Should some palms not meet those standards they will be discarded and collectors will not be paid for their efforts. After the palm selection, the warehouse will pay the villager who accompanied the palm delivery. This
village representative will then go to local markets to buy supplies requested by community members before returning home. Problems have occurred when representatives return and attempt to distribute supplies and profits from palm sales. Due to poor record keeping and palm sorting occurring far from the village, collectors have little recourse to verify the profits that they receive are correct, if any remain after buying supplies. Palms collected in Juchitán will be sent to other warehouses and/or export facilities in Chahuites, Oaxaca and/or Tiltepec, Chiapas or local Oaxacan markets. U.S. Importers will then distribute palms to U.S. wholesalers (see Figure 5).

*The U.S. link: from warehouse to church house*

Palm fronds and their sales within the United States are but one component of a large floral business. Unlike Mexico, U.S. suppliers do not depend so heavily on palm sales and they can easily replace palms with other plant material if need be. Processing and distribution of the palm in the U.S. is simplified and standardized, as they are incorporated into the routine management procedures of floral businesses. The majority of church members have direct contact with palm fronds only once a year for Palm Sunday. Floral arrangements will incorporate palm fronds, but the explicit use of palm fronds alone occurs during Palm Sunday, limiting consumer exposure to palm fronds.

The two managers of floral wholesale companies interviewed in Southern California receive a shipment of *Chamaedorea* palms from IPF 2 to 3 times a week. Palms arrive via truck packaged in cardboard boxes. There are 30 bunches of 20-stem bundles in 1 box. Palms arrive tied together by rubber band. Attached at the base of each is a quality tag. The quality tag states where and by whom palms were graded and sorted. Both wholesalers have been buying palms from International Palm Fronds, one for 40 years and another for 10 years. There are only 6 palm importers in total that operate throughout the United States (CEC, 2002). The local Iowa florist buys palms from a wholesaler in Des Moines. The wholesaler delivers the palms to the store by truck. The floral outlet buys palms in bundles of 20, not in boxes. All three outlets sell intact or full *Chamaedorea* palm fronds, no blades or split fronds. RSO sell both full palm fronds and palm blades, created from splitting the leaves of larger palm frond.
Figure 5. Replicated from CEC (2002). Distribution of *Chamaedorea* in Mexico and the U.S.A.
One wholesaler does not process or alter the palms in any fashion. The box of palms is opened and placed in refrigeration. The other wholesaler conducts modest processing of the palms. Palms may be cut at the stem and placed in fresh water, left in the box and continually misted and/or wrapped in newspaper. All palms are placed in refrigeration. Florists will cut palm stems, place the palms in water and refrigerate palms until they are used. At this stage a leaf shine, a chemical preservative, may be applied to leaves to enhance

Forest & Palms

Community
- Collectors amass palms for collective sale
- Minimum 700 kilograms of palm needed to cover transport costs
- Palms loaded onto truck

Bodega, Juchxtan
Operated by coyote
- First palm selection
- Collectors paid
- Coyote may sell two Acopios

Regional collector
Chahuites, Oaxaca
- Second selection

Community representative is paid for palms, purchases supplies and returns to the communities.

Regional collector
Titepec, Chiapas
- Second selection

Exporters
- Hojas Verde & International Palm Fronds
- Final palm selection

U.S. Wholesalers & Retailers
Palms in other floral arrangements

Religious Supply Outlets
Churches:
Palm Sunday Weddings/Funerals

Palm Gardens, Texas
- Grows their own palms

Figure 6. Chamaedorea market chain for the communities of San Miguel Chimalapa and subsequent distribution channels of the United States.

Peterson. Leaf shine may be responsible for the bad smell reported by two interview respondents buying palm fronds from local florists. The smell was evident before and after burning the palm fronds for Ash Wednesday.

As indicated above, the Chamaedorea fronds require very little processing at wholesale and retail levels. Florists likely spend greater amounts of time working with the
Chamaedorea palms, as they create large floral arrangements with the fronds. In addition, retailers will remove palm fronds from packaging, cut the stems and place them in water, whereas at the wholesale level the palms simply remain in boxes under refrigeration. The quantity of palms a wholesaler receives also has little effect on processing requirements. Palms will likely take up more room in refrigerators at the wholesale than at the retail level.

Floral wholesalers pay between U.S. $1.99 to $2.50 for a 20-stem bundle of palm fronds. They sell them for U.S. $3.50 per bundle, making between 40% and 75% profit for every bundle sold at the wholesale level. Wholesaler profits decrease, to 37% above cost, if a customer buys in bulk. The florist buys palm in bundles of 20 for U.S. $2.50 to $3.00 a bundle. Florists will sell bundles for U.S. $5.99, for a profit of U.S. $2.99 to $3.49 dollars for every bundle sold. This represents a 99% to 139% return from palm sales. Sales for all three outlets peak during the Easter season. Final suppliers such as florists and religious supply outlets profit most from palm sales and stand to profit most from Fair Trade sales. Respondents from the church survey show the following distribution of final outlets from which they buy palms (see Table 2).

<table>
<thead>
<tr>
<th>Outlet</th>
<th>Percent of survey respondents purchasing palms from the stated outlet*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local florists</td>
<td>34.7%</td>
</tr>
<tr>
<td>Church distributor</td>
<td>34.7%</td>
</tr>
<tr>
<td>Wholesalers</td>
<td>3.0%</td>
</tr>
<tr>
<td>African Palms USA</td>
<td>8.0%</td>
</tr>
<tr>
<td>Self supplied</td>
<td>3.0%</td>
</tr>
<tr>
<td>Palm Gardens</td>
<td>1.3%</td>
</tr>
</tbody>
</table>

*Percentages do not equal 100 as some respondents did not answer or did not know the sources of their palm

Palms in Celebration- function, significance, and quality: Information about specific uses of palms by one of their major consumers—churches—was obtained from 75 completed surveys (representing a 22% return rate) and 15 personal interviews. The majority of returned surveys were received from Catholic and Methodist churches. Most responses were received
from the Midwest region of the United States, as is classified by the U.S. Census Bureau. The average congregation size, for all survey respondents was 816 members, with as few as 75 registered members and as great as 5,000. Respondent churches spent, on average, U.S. $87 on palms used in Palm Sunday festivities, with as little as U.S. $5 to as much as U.S. $500 dollars. The average cost of palms was calculated based on information provided by respondents; only 42 of the 75 respondents answered that question.

Palms are used in a variety of manners during Palm Sunday celebrations. Often a church will use one or two palm species when celebrating Palm Sunday. Churches use an entire palm frond, a blade cut from a palm frond, potted palm plants or a combination of the three options. Palm fronds used on Palm Sunday may be used as ornamental decorations, procession instruments, sermon tools, ornaments worn by member, a tool in children’s arts and crafts, they may also be burnt for ashes. Palms utilized as ornamental decorations are either palm fronds or potted palm plants found on the altar or adorning church entrances. These decorations may also be scattered throughout the church hall and outside the church building. When used in procession, either by adults, children, choir members, staff members or a combination of such people, palm fronds are held high above the head and waved by congregation members as they enter the church and seat themselves. Procession participants may also lay the palms at the foot of the altar before returning to their seats. When used as a sermon tool the physical presence of the palm and its representation are used to encourage member participation in Palm Sunday services. Church staff will withhold some palm fronds or blades to dry out during the coming year. These palm fronds or blades will be burnt during the next years’ Easter week celebrations, creating ashes to be used in the Ash Wednesday holiday.

In speaking with churches it became evident that the palm serves as a powerful symbol and reminder of Jesus’ entry into Jerusalem. How palms are used as symbolic tools varies between congregations. Some will fashion palms into crosses, others hang fronds in church halls, some carry palms in procession, and several will lay the fronds at the foot of the church alter. Congregation members may be encouraged to braid blades at home or in church. Others bring the palm home and hang it on the wall throughout the year to “bring
church to home.” “The individual palms are a symbol, a reminder of [Jesus’ entry into Jerusalem], a touchstone.”

In contrast some churches do not believe palms are essential for the celebration of Palm Sunday. One respondent stated, “palms are not that pivotal, if we had really bad palms we’d probably find another way to get something that looked suitable.” At least two interview respondents rotate between palm fronds and branches and/or other plant material. They do so because they are “not sure the Bible emphasizes palms at all.” These two interview respondents stated the congregation would use palm every other year and substitute other plant material in alternate years. Three survey respondents of 75 or 4% of the total survey respondents said they celebrate Palm Sunday and did not use plant material of any kind.

**Opportunities for applying Fair Trade marketing mechanisms to palm:**

Through the analysis of the three study systems I was able to identify significant opportunities for creating and accessing Fair Trade palm markets. Most significant was the relationship between churches with social and outreach programs and their potential to support Fair Trade initiatives. The greatest potential to generate support for a Fair Trade palm market would come from the collaboration between churches that have established outreach programs and coordinators of a Fair Trade palm initiative. Five additional opportunities and strategies for creating a Fair Trade palm market were identified, which rely on traditional methods for developing Fair Trade markets. These additional opportunities or strategies in reaching potential consumers and creating a market for Fair Trade palms are discussed in Chapter 3.

**Churches social outreach efforts and openness to using Fair Trade palms:**

The results from interview and survey analysis show that churches with active social outreach programs have a greater tendency to support Fair Trade than those without social outreach programs. Statistical analysis reveals that a weak but positive correlation exists between churches active in social outreach and Fair Trade participation ($P = 0.009$). Further, the original relationship I had hoped to find between environmental programs and
participation in Fair Trade was not significant. Statistical analysis found no significant relationship between churches active in environmental programs and their participation in Fair Trade (P > 0.05). Thus I believe, significant potential exists to build support for Fair Trade palms in churches with active social outreach programs. Previously identified (Littrell & Dickson, 1997b; Ericson, 2002; Moore, 2004) as active Fair Trade consumer churches and their social outreach programs offer significant inroads to accessing potential consumers of certified palm. Building from an establish base of awareness certified palms may easily find support for its cause in churches with active outreach programs. However churches with established environmental programs should not be overlooked by a Fair Trade palm initiative.

Eight-four percent of survey respondents participated in social outreach programs. Examples of the social outreach programs churches participate in are: food pantries, tsunami relief efforts, elder housing care, advocacy for minority rights, clothing drives, homeless and abused women shelter and educational programs such as English as a Second Language. Reasons given for why they supported such outreach efforts were: church doctrine, they felt a need, member suggestion, pastor suggestion, and to give back some of what they have received. In their efforts to address social injustice and create well-rounded social outreach programs, 60% of survey respondents worked with institutions and/or people outside of the church’s affiliation.

Few of the churches surveyed had established environmental programs, outside of recycling. Of all the survey respondents 47% stated that they had established environmental programs; again, almost all of those listed recycling as their main environmental effort (see Table 6 below). In addition to recycling survey respondents participated in three other environmental programs: environmental education, community clean-up efforts and watershed protection. Two survey respondents participated in environmental education, 8 participated in community clean-up efforts and 1 participated in watershed protection. Reasons listed for why congregations participated in environmental programs were: they felt a need, could make money from efforts, city mandate, its important, and church member suggestion.
Seventeen, or 22%, of the 75 survey respondents served or were working towards serving Fair Trade coffee after mass. Some also served Fair Trade chocolate and/or tea in addition to coffee. Eighty-two percent of survey respondents who participated in Fair Trade also participated in environmental programs, of which the major activity was recycling. Ninety-four percent of survey respondents active in Fair Trade also participate in social outreach programs (see Table 3). There appeared to be a positive correlation between church participation in Fair Trade and willingness to pay more for a Fair Trade product ($P < 0.05$). When an interview respondent was questioned about the lack of environmental programs at the church they stated, “if you live well, that incorporates the environment into the equation.” Another reported that, members “are invited to live it out in their everyday life, we do not have any programs which we as a parish are involved in.”

Predicting future survey respondents’ participation in Fair Trade based on current participation in environmental programs was not as obvious as it was with their social outreach programs. However, there appeared to be a positive relationship between church participation in environmental and interest in buying a sustainable palm product ($P < 0.05$). While no significant relationship was found between churches with active social outreach programs and interest in buying a sustainable palm product. However, interview data was also drawn upon to complete the analysis of the relationship between outreach and/or environmental programs and interest in a sustainable palm product. Prior to drawing conclusions from such statistical tests, one must recall that the number of churches with active environmental programs was considerably smaller than those churches active in outreach programs. Thus even a small proportion of those survey respondents active in environmental programs demonstrating an interest in a sustainable product could create a significant relationship not found in churches with active outreach programs. In addition the majority of environmental programs which churches did participate in centered on recycling efforts, which often are facilitated by city programs and do not represent a significant effort in environmental protection, conservation or restoration. Again, caution must to be exercised in making any judgments based on this data due to the small sample size.

In order to implement and succeed in their social justice efforts churches will work with a number of outside institutions to achieve their outreach goals. These partnerships
demonstrate the willingness of churches to reach beyond church administrative and congregational boundaries in order to succeed in outreach goals. As one interview respondent said “we try to work together on these projects so that we can be strengthened in numbers, [you] just do a better job for more people with more resources.” Forty-three percent of congregations active in social outreach sought the assistance of outside institutions, while 34% of congregations with environmental programs sought assistance of outside institutions. The attitudes and willingness to work with others of socially active congregations bodes well for a Fair Trade palm initiative because it is unlikely that such an initiative would succeed without partnerships between churches and other institutional organizations.

Table 3. Percentage of survey respondents involved in Fair Trade, participating in either social outreach or environmental programs.

<table>
<thead>
<tr>
<th></th>
<th>Do you participate in Fair Trade programs?</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Does this congregation participate in social outreach programs?</td>
<td>16 (94%)</td>
<td>47 (81%)</td>
</tr>
<tr>
<td>NO</td>
<td>1 (6%)</td>
<td>11 (19%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>17 (100%)</td>
<td>58 (100%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Do you participate in Fair Trade programs?</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Does this congregation participate in environmental programs?</td>
<td>14 (82%)</td>
<td>35 (60%)</td>
</tr>
<tr>
<td>NO</td>
<td>3 (18%)</td>
<td>23 (40%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>17 (100%)</td>
<td>58 (100%)</td>
</tr>
</tbody>
</table>
Table 4. Willingness of those survey respondents participating in Fair Trade to buy a sustainable palm product.

<table>
<thead>
<tr>
<th>Would your congregation be interested in buying a sustainable palm product?</th>
<th>Do you participate in Fair Trade programs?</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>YES</td>
<td>14 (88%)</td>
<td>39 (72%)</td>
</tr>
<tr>
<td>NO</td>
<td>2 (12%)</td>
<td>15 (28%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>16 (100%)</td>
<td>54 (100%)</td>
</tr>
</tbody>
</table>

Note: Five respondents indicated “unsure” and were not included in the calculation of percentages.

Table 5. Willingness of those respondents participating in Fair Trade programs to pay more for a sustainable palm product.

<table>
<thead>
<tr>
<th>Would your congregation be willing to pay more a sustainable palm product?</th>
<th>Do you participate in Fair Trade programs?</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>YES</td>
<td>13 (76%)</td>
<td>25 (49%)</td>
</tr>
<tr>
<td>NO</td>
<td>4 (24%)</td>
<td>26 (51%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>17 (100%)</td>
<td>51 (100%)</td>
</tr>
</tbody>
</table>

Note: Seven of the respondents indicated “unsure” and were not included in the calculation of percentages.
Table 6. Percentage of survey respondents involved in environmental and social outreach programs.

<table>
<thead>
<tr>
<th>Environmental Programs</th>
<th>Environmental programs, other than recycling</th>
<th>Social Outreach</th>
</tr>
</thead>
<tbody>
<tr>
<td>47%</td>
<td>14.7%</td>
<td>84%</td>
</tr>
</tbody>
</table>

The greatest potential in building support for Fair Trade palm markets comes from working with socially conscious church groups. Church support was critical in the creation of the Fair Trade movement and continues to this day to aid in Fair Trade successes. Although churches’ awareness of a specific alternative trade product may be low, that does not diminish current social justice and outreach efforts. It is evident from data presented above that social outreach is a large component of church doctrine and action.

Just as many consumers feel they can “vote” with their dollar so do churches. An example of effectively advancing social outreach efforts by tapping into church doctrine and dollars is that of African Palms USA. African Palms USA exemplifies a fruitful relationship between socially active churches and an alternative trade initiative by facilitating the alternative trade of dried palm crosses. The success of African Palms USA illustrates how socially oriented labels can contribute favorably to expanding Fair Trade markets, while simultaneously meeting the church outreach goals. I spoke with one congregation that bought dried palm crosses from African Palms USA. In addition to this congregation, six survey respondents indicated using African Palms USA. Of the six respondents five indicated buying fresh palm fronds in addition to the dried crosses.

The church I spoke with that used African Palms USA as a supplier participates in six social outreach programs; they believe social outreach activity to be an extension of the seven principles of Catholic teachings. The congregation switched to AP USA because they feel AP USA is a social outreach program, which works in accordance with those seven principles of Catholic teachings. “We chose to go with the palm crosses as a way of donating to an outreach effort to help meet basic human needs in East Africa.” Patronizing African Palms USA was viewed by church members as another outreach effort of the church. The respondent stated that they educate the congregation in the principle of “caring for God’s
creations” but do not support any church affiliated environmental programs. Members are encouraged to practice these efforts at home.

Prior to using AP USA the congregation I spoke with used fresh palm blades in Palm Sunday celebrations. Previously congregation members were given their own palm strips to wave during the procession. At a church member’s urging they switched to African Palms USA. The palm crosses are given to the congregation as it enters the church hall. A procession of communion ministers will walk into the church hall; each communion minister carries a large palm frond during the procession for a total of 9 fresh palm fronds. Potted palm trees are also used to decorate the church hall and fresh palm fronds cut from garden trees are used as altar decorations. By utilizing a reduced number of fresh palm fronds the church maintained traditional appearances within the church environment and continued a long held celebration practice. Important to note is that some churches buying from AP USA still use fresh palm fronds to maintain important Palm Sunday traditions and appearances.

Increased costs could not be avoided and are incorporated into church expenses. The interview respondent stated that the price is high but it is an expense they are willing to pay because it is an annual expenditure that can be built into the churches budget. The congregation used to order 4,000 palm blades from a religious supply outlet. The cost of palm blades was $9.45 for 100 blades, for a total cost of $378 dollars to outfit all members. Today the congregation pays $728 dollars for 4,000 palm crosses, almost double previous costs. Congregations’ openness to embrace a program such as African Palms USA and their willingness to pay additional money for this alternative product is generated from the shared values of the church and the African Palms USA program. The justification for increased palm cost is found in the objectives of AP USA program. In seeking consumers, which share their values, AP USA is able to generate sizable grants for people living in African countries. As is stated is Chapter 3, educating consumers about the efforts behind Fair Trade palms to advance collector well-being and environmental conservation (i.e. adding value through social and environmental qualities) will aid in the success of a Fair Trade palm initiative.

Churches using AP USA could represent an important consumer to target when marketing Fair Trade Chamaedoreas, as they are identified supporters of socially just palm initiatives and still enjoy using fresh palm fronds in celebrations.
Impediments to Fair Trade palm markets:

Through my analysis of the study systems I noticed obstacles that may prevent producers, suppliers and consumers from working with and/or buying Fair Trade palms. Many issues need to be seriously addressed, if a Fair Trade palm initiative is to be created. There are five major impediments limiting actor access to Fair Trade palm markets. The first regulation of Mexican non-timber forest products creates high costs of permits and low return from palm sales which may prohibit collectors’ participation in Fair Trade. Second, barriers are created by limited knowledge of and demand for Fair Trade. Third, an additional impediment may be created by increasing the cost of palms through certification. If the price of certified palm exceeds the prices florist are willing to pay, and can profit from, they are likely to find cheaper alternatives for use in floral arrangements. Should prices rise beyond what church consumers are willing to pay per frond, the risk of losing a critical market will also increase. Fourth, the extended nature of the market chain puts considerable distance between the consumer and collector, making a direct connection between the two groups difficult. An extended market chain also poses problems for coordinating Mexican and U.S. supply chains. Finally, the low discernment for quality and increased potential for substitutes, allows *Chamaedorea* palm fronds to be replaced by other palm-like material. Due to the lack of consumer and supplier concern for palm quality and type, no single palm is denoted as ‘the Palm Sunday palm’ and therefore no palm can dominate the church market. Each of these impediments will be discussed in greater detail below.

The cost of non-timber forest product regulation: Permits or profits

Before palms can be harvested and sold in Mexico, communities that collect palms must receive a permit from the office of SEMARNAP. In order to receive a permit, communities must present SEMARNAP with a study of the ecology and biology of palm populations in proposed collecting areas. Reports are often contracted to outside technicians costing communities substantial sums of money upfront. Once communities are granted permits, they must abide by the Mexican norm, NOM-006-RECNAT-1997, which regulates the cutting, collecting, selling and transportation of palm leaves. Permits restrict the amount and species of palm to be cut. Regulations also mandate and monitor recovery time for
collecting sites. Collectors report to SEMARNAP the species collected, in what amount, and in which section of forest (see Figure 7).

<table>
<thead>
<tr>
<th>Date</th>
<th>Species</th>
<th>Rolls Cut</th>
<th>Weight in Kg</th>
<th>Max Vol. Authorized</th>
<th>Balance Remaining</th>
<th>Location</th>
<th>Collector ID #</th>
</tr>
</thead>
</table>

Figure 7. Recording system for the regulation of palm collection by species and location.

Due to the high cost of technical reports needed for permit applications, communities often forego obtaining reports and permits and harvest palms illegally (A. Ríos-Sánchez, personal communication). Collectors selling palm fronds without permits may face serious consequences. If the first intermediary (the coyote) were to be discovered buying from non-permitted collectors he would be fined heavily (A. Ríos-Sánchez, personal communication). Due to the increased risk coyotes assume when buying palms from non-permitted collectors, coyotes will reduce the price they pay. The use of a permit for ecological regulation has turned some palms sales into a black market transaction unregulated by government officials, leaving non-permitted collectors at the mercy of coyotes.

The prohibitive costs of the current palm permitting system in Mexico will restrict collectors’ participation in legal, let alone Fair Trade, palm sales. The regulation of Fair Trade systems is critical for the legitimization of the label. Black market sales of any product are not condoned by the FLO and would prohibit regulation by the FLO. It is also probable that collectors without permits would rather not call attention to themselves for fear of penalization. Denying a producer the opportunity to participate in Fair Trade because they cannot afford a permit (or certification fees) is prohibited by Fair Trade standards. As is the case with coffee, small producers do not pay certification fees; rather fees, from Fair Trade coffee licensees help pay for farm certification. In addition one cannot assume that Mexican officials will allow Fair Trade collectors to by-pass established environmental regulations because they are participating in a Fair Trade scheme.

Consequently we can identify two critical steps necessary for palm collectors to acquire a Fair Trade label. First, they must acquire a palm harvesting management plan and
apply for a collection permit, from the Mexican regulatory agency SEMARNAP. Second, after receiving a permit, collectors must apply for FLO certification. Although efforts to develop Fair Trade certified palm markets are in their infancy some communities are preparing for alternative markets, as was witnessed from my conversation with Toledo-Mendez, the leader of the Rio Manso community. However, if initiative efforts in producing countries move too slowly, communities will express doubt and reduced interest in acquiring legal documentation for palm collecting, as Toledo-Mendez also expressed, stalling any chance for fair palm markets.

Another problem with permits is the finite number of permits allotted to communities living in collecting regions. The two villages of San Miguel Chimalapas share a single permit, which means they must split the volume of collectable palms between the collectors of both villages. Additionally, both communities are responsible for the maintenance and regulation of the collection sites. The permit alternates between villages for a designated amount of time during which the permit holding community can collect their share of palm fronds. In reality, both communities continuously collect palms and thus sell some proportion of their total palm harvest illegally. This results in lower incentive to care for forest resources since ownership and access are nebulous. Allotting only one permit to two communities has increased mistrust between the two villages and encourages opportunistic harvesting (as one community fears all good palms are being harvested by the other) and illegal trading of palm fronds. The situation facing these two communities is not one that can be addressed by Fair Trade certification alone; it is an issue to be resolved between the two communities with support from Mexican regulatory agencies.

The leader of the Rio Manso community, Toledo-Mendez, had told me that the community has recently acquired a permit for legal palm collection from their *ejido* lands. The report needed in order to submit the request for a permit cost his community a substantial amount of money. Toledo-Mendez stated that the community applied for the permit after numerous years of “illegal” harvesting because he wanted to enter into “*mercados justos*”, fair or alternative markets, and he was told he could not do so without such a permit. Toledo-Mendez expressed some regret about acquiring the permit, as it requires updating and refinancing on a ten-year cycle. Further, he feels that the benefits have
not outweighed the costs, and that the community is no closer today to achieving access to fair markets than they were before obtaining the permit.

Toldeo-Mendez has been actively seeking alternative and direct markets. He traveled to the WTO meeting in Cancun, September 2003, where he participated in a symposium about Fair Trade Chamaedorea palms sponsored by the CEC. Toledo-Mendez brought palm fronds from his community to demonstrate the quality of his community’s palms. However he has been unable to make further progress in accessing alternative or direct markets. Toldeo-Mendez reported that collectors throughout the region are no longer harvesting C. tepejilote fronds due to their low price, preferring to wait for a price increase before resuming harvests. Until such a price increase occurs, they are utilizing scarcer and more valuable C. elegans and C. oblangata fronds.

In the more remote parts of the Chimalapas region, there is also a lack of knowledge about Fair Trade options and procedures which further compounds difficulties in promoting these markets. Collectors in this region seem to be unaware of the certification efforts or options available to them. The question most asked by palm collectors was: “What happens to my palms once they reach the United States?” or in others words, what does the market chain look like for palms once they leave my village and eventually Mexico? The biggest concern of collectors was the poor economic return from palm sales. Collectors and local non-governmental organization (NGOs) representatives expressed concerns about palm quality and handling. Palm collectors in both communities were interested in knowing what is perceived as a quality palm in the United States and how they could improve their product to meet those perceptions.

Limited demand for and knowledge of certified floral products:

Information about how a product is produced gives consumers a more complete understanding of the product that they are consuming. The value of a product is more likely to be determined by production practices and value added in production, if the details of how a product is produced are made explicit to consumers. Thus, knowing this information, price alone does not determine the true worth or value of a product. If consumers or suppliers have incomplete information about a product their ability to make decisions concerning that
product or value judgments of the product, are limited. Thus, consumers and suppliers cannot support, seek out or buy Fair Trade products if they are unaware that they exist or are unaware of harmful environmental and social effects associated with the production of the product. In my study lack of knowledge appears to be one important factor hampering the flourishing of Fair Trade palm markets. Such a situation contributes to low demand which may have several complementary or synergistic causes.

Knowledge: Both wholesale managers interviewed in this study were aware of where the Chamaedorea are grown and had basic knowledge about how they are collected. One wholesale manager showed me two professionally arranged brochures he received from International Palm Fronds (IPF). The first brochure explained about the palms available for order and gave suggestions for their use. The second brochure explained the story of Mexican Chamaedorea collectors. IPF attempts to educate suppliers through brochures, not only pertaining to palm use but the story of palm collection. By sharing this information IPF not only attempts to explain the quality of their product but also hopes that the story of their palm may be passed along to the consumer. In contrast, the manager of the floral outlet was unaware of where or how Chamaedorea was grown or harvested.

When asked if they specifically source organic flowers, the manager of one wholesale operation said he was unaware of what the term organic meant. He was unsure if he could supply any organic flowers or plants, as demand for such product was low to non-existent. Floral production methods were not a concern for the company. When asked if he felt his customers would order organic floral products he stated “I think they try to do what’s the most cost effective because certain things could run a lot of money and certain people do run on a budget.” The second wholesale manager does not source organic flowers; he is unaware if it is possible in the floral industry. However, the ranch owned by the wholesale outlet, where flowers are grown for the wholesale operation, utilizes a beneficial insect program to reduce pesticide spraying. The floral outlet manager expressed no concern for organic flowers or organic floral production techniques. The florist sells no organic plant products and does not believe that she could source any organic products. The manager of the floral outlet stated that the floral shop is 1 of 10 corporate outlets in Iowa. A total of 100 franchises of this particular company exist throughout the Midwest. The corporate headquarters will
make any significant decisions concerning specialty flowers and other products. Such a hierarchical structure offers a potentially noteworthy entry point to the marketing of Fair Trade palms, where a large volume of sales may occur through one venue. The hierarchical structure can equally serve as a barrier.

**Demand:** Low demand for Fair Trade flowers and other certified floral products is the greatest impediment to Fair Trade certified palms. Fair Trade roses sold in Switzerland since 2001 have recently become popular in Europe. Public awareness was raised when Swiss advocates publicly protested the harmful production practices associated with roses on Mother’s Day, a period when rose sales are high. However roses remain the only Fair Trade certified flower product. Within the U.S. there is little evidence of consumer demand for certified floral products. Without this demand suppliers will have no incentive to stock certified floral products for consumers. Further, without supplier demand for such products, producers have no markets in which they can sell their certified products.

The lack of awareness and concern for certified floral products is reflected in the floral stock of wholesalers and florists. If suppliers are unaware that certified floral options exits they are unable to provide these choices to consumers. When a wholesaler was asked if he could source organic or certified products, he replied “[it is] not necessar[y] because that’s not really the demand…I guess if we had to we probably could.” Statements such as these demonstrate a lack of concern for the subject, as any interested supplier would know that certified products are not available in the U.S. However statements such as these also demonstrate the willingness of suppliers to seek out products if a demand exists for them. If the U.S. demand for certified floral products increased would they be made available? Most actors are not in the floral business for altruistic reasons; they will not supply organic or certified products unless they can sell them. As one supplier put it, the floral business is “all basically about a money issue and profit on what’s feasible.” However, bringing to their attention the rising concern and demand for such products in Europe and Canada could potentially increase their interest in such a product.
Table 7. Survey respondents’ knowledge of and interest in how palm fronds are produced.

<table>
<thead>
<tr>
<th>Response</th>
<th>Is the congregation aware of where palm fronds are grown?</th>
<th>Is the congregation aware of how palm fronds are grown?</th>
<th>Is the congregation interested in knowing this information?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>8% (6)*</td>
<td>6.7% (5)</td>
<td>33% (25)</td>
</tr>
<tr>
<td>No</td>
<td>90.7% (68)</td>
<td>90.7% (68)</td>
<td>64.3% (48)</td>
</tr>
<tr>
<td>Unsure</td>
<td>1.3% (1)</td>
<td>2.7% (2)</td>
<td>2.7% (2)</td>
</tr>
<tr>
<td>Total</td>
<td>100% (75)</td>
<td>100% (75)</td>
<td>100% (75)</td>
</tr>
</tbody>
</table>

*Indicates actual number of survey responses

The large majority of mail survey respondents that reported little interest in learning about where and how palm fronds are grown was contrary to the findings obtained from the face-to-face interviews. Only 33% of mail survey respondents stated that congregation members would be interested in learning about how and where palms are collected and grown. Further, 90.7% were unaware of how or where palms were grown (see Table 2). When interview respondents were approached with similar questions they, at first, responded by defensively stating, “we were not aware of any adverse effects …you are the first person I have ever talked with about this.” Such comments were later followed with “if you have any recommendations I would be happy to follow up on them,” while another respondent offered to pay shipping for the certified palms if I could get them to him by Easter 2005. It became evident that once people were made aware of the concern over palm frond collection and the concept of certified palms, genuine interest was raised. Approximately half of interview respondents reacted positively to the information I presented and wanted to learn more about Fair Trade and *Chamaedorea* palms. The remainder either did not buy palms or would not pay more for certified palm fronds. Given the responses from interviewees, there is evidence that current low levels of concern over palm collection and forest conservation may be countered by educating consumers about the issues a Fair Trade palm label hopes to address. Approaches based on more personal, face-to-face or member-to-pastor, interactions should further facilitate consumer discussion and awareness-raising processes.
The risk of increasing palm prices through certification:

The cost of Chamaedorea palms to suppliers is relatively low; because of this Chamaedorea has become an important green used in floral arrangements. Unfortunately, profit from palms incorporated into floral arrangements is difficult to calculate. If the price of Fair Trade palms is too high florist may discontinue using them in floral arrangements, where palm fronds are now most heavily used. One should be careful not to turn a low cost arrangement filler into an expensive product, causing a reduction in its use. If florists discontinue using palms as filler, collectors will lose a critical market. Efforts might best be targeted at establishing higher value Fair Trade markets first, such as the direct sales of palms to churches. In the future, efforts can address the issue of expanding Fair Trade palm into low return floral arrangements to increase market demand and create specialty Fair Trade floral arrangements. The majority of survey respondents, 50.7%, indicated that flower arrangements used in weddings and funerals were provided by congregation or wedding and funeral party members; 45.3% of these respondents bought arrangements from local florists. Based on these numbers, church administrators have the potential to influence a large number of wedding and funeral parties to purchase Fair Trade palms from local florist.

Figure 8. Survey respondents’ interest in purchasing and willingness to pay more for sustainable palm fronds
In addition to the supplier costs, one must also be careful to keep prices within the budgets of churches and other consumers. Based on survey responses, the majority of churches were interested in buying sustainable palms but many were unwilling to pay more for them (see Figure 6 above). Those churches that stated they were willing to pay more, on average, would pay an additional €0.37 per frond. If palm prices were to increase by €0.25 a frond, the cost of a 20-stem bundle would increase by $5 dollars. A 20-stem bundle sold at the retail level would cost consumers $10.99 instead of $5.99. If the current number of market chain actors profited equally from this price increase each would receive €0.71 cents more per unit sold, almost doubling what collectors currently receive. However, producers’ profits would be based on a sale unit of 144 fronds per bundle while florist profits are based on 20-stem frond bundles.

*Extended length of market chain leading to inequitable profit distribution and low actor accountability:*

Fair Trade’s principle goal is to circumvent unequal trade relations directed only by price and production by “relinking” consumer and producer within more direct market structures. Currently, eight actors participate in the palm market chain: collector, coyote, regional collector, exporting warehouses, U.S. importer, wholesaler (and possibly a second smaller wholesaler), retailer, and consumer. This extended market chain poses three problems for Fair Trade palms. First, the current market chain and market structure prohibits the creation of direct buying/selling channels for palm. Second, it creates unequal power relations between market chain actors. Third, it increases difficulty in equitable distribution of Fair Trade profits to multiple actors.

Established distribution channels within the U.S. make direct or even “more direct” (i.e. by shortening the market chain) palm sales problematic. Large import companies find it difficult to market directly to consumers, while wholesalers interact with the general public on a limited bases. Economies of scale prevent direct interaction between importers and consumers. It is not in an importer’s best interest to sell a handful of palms to consumers from the back of a semi-truck loaded with 300 boxes of palms. Wholesalers have similar issues of scale but are better able to accommodate the public as they have accessible
warehouses and a larger workforce that can breakdown the large boxes of palms delivered by importers such as IPF. Similar problems have been noted with Fair Trade bananas, where product perishability has prevented the elimination of traditional market mechanisms.

In contrast, religious supply outlets do not encounter problems associated with extended market chains as do those suppliers which source Mexican palm. RSOs often source their palms, in particular the one I spoke with, from US based companies that grow and processes their own palm fronds and blades in Florida, Texas and California. Palms are shipped directly to RSOs by the producers from the US based production and processing site. Thus palms bought from RSOs, which source palm in this manner, pass through a single intermediary before reaching church consumers.

Creating direct markets within Mexico may be difficult due to the culture of middlemen in the Chamaedorea trade. Collectors within an ejido or numerous ejidos could organize into cooperatives and begin to sell directly to exporters. This would likely require collectors to obtain additional infrastructure (i.e. a truck) and contacts, traditionally provided by middlemen. Eliminating middlemen in Mexico would also leave well-established market chain actors without an important income source. In the case of banana certification, Fair Trade banana producers in the Dominion Republic were unable to bypass any intermediaries due to the infrastructure created and controlled by transnational corporations (Shreck, 2005). Instead, fruit was sold through a FLO certified exporter (Shreck, 2005). Considerations regarding whether or not certain actors should be eliminated from the market chain must be made carefully.

Fair Trade certification is not necessarily given to an entire product chain. Thus, not all actors along a market chain are required to follow the same Fair Trade standards as others, creating unequal playing fields for actors involved in the chain. This could become a problem in an extended market chain such as palm where regulation is likely to be difficult, maybe even resisted. If the more powerful actors are to remain in control of the palm market, such as intermediaries, then they will continue to control the way the Mexican market chain functions. Thus the elements that undermine the power of palm collectors most (i.e. low palm prices and unknown selection criteria) will not be addressed, improved or eliminated.
Table 8. Approximate gross amounts (in U.S. dollars) from palm sales throughout the market chain, Mexico & United States.

<table>
<thead>
<tr>
<th>Actor</th>
<th>Price per unit</th>
<th>Standardized profit per 100 fronds</th>
<th>Profit added, absolute percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Palm Collector</td>
<td>0.44¢ - 0.70¢ per 144 fronds, C. Tepjilote 0.44¢ - 0.88¢ per 144 fronds, C. Oblangata 0.88¢ - $1.05 per 144 fronds, C. Elegans</td>
<td>0.50¢</td>
<td>1.6%</td>
</tr>
<tr>
<td>2. Coyote</td>
<td>0.88¢ - $1.05 per 144 fronds</td>
<td>0.70¢</td>
<td>$0.20, 40%</td>
</tr>
<tr>
<td>3. Regional Intermediary</td>
<td>$1.23 per 90 stem bundle</td>
<td>$1.40</td>
<td>$0.70, 100%</td>
</tr>
<tr>
<td>4. Mexican Exporter</td>
<td>$1.23-$2.61 per 90-stem bundle</td>
<td>$2.90</td>
<td>$1.50, 107%</td>
</tr>
<tr>
<td>5. U.S. Importer</td>
<td>$1.99-$2.50 per 20-stem bundle</td>
<td>$12.50</td>
<td>$9.60, 331%</td>
</tr>
<tr>
<td>6. U.S. Wholesaler</td>
<td>$3.50 per 20-stem bundle</td>
<td>$17.50</td>
<td>$5.00, 40%</td>
</tr>
<tr>
<td>7. Floral Retailer</td>
<td>$5.99 per 20-stem bundle</td>
<td>$29.90</td>
<td>$12.40, 71%</td>
</tr>
</tbody>
</table>

Approximate gross amounts from palm sales, for palms grown within the U.S. & used in Palms Sunday celebrations.

<table>
<thead>
<tr>
<th>Actor</th>
<th>Price per unit</th>
<th>Unit Price</th>
<th>Total Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Palm Gardens</td>
<td>$7.84 per 100 strips</td>
<td>$7.84</td>
<td>$186.75</td>
</tr>
<tr>
<td>2. Religious Supply Outlets</td>
<td>$11.20 per 100 strips</td>
<td>$11.20</td>
<td>$267.00</td>
</tr>
</tbody>
</table>

Extended market chains create the difficulties in providing for equitable distribution of Fair Trade profits. Shreck (2005) illustrates a similar problem in the Fair Trade banana market chain. Profit distribution became problematic due to misunderstandings between producers and exporters over Fair Trade principles and the implementation of those principles (Shreck, 2005). The community of Rio Manso is an example of one community’s progressive efforts at forest conservation, restoration and accessing alternative markets. Often, as has been the case in the past, outside institutions direct efforts to help communities access equitable or alternative markets. However, “producers’ lack of knowledge of Fair
Trade can be partially explained...[by the fact that it] was introduced to them as yet another scheme dreamed up by foreigners with that stated goal of helping small farmers” (Shreck, 2005: 25). Making adoption of Fair Trade principles a mandated form of aid reduces collectors’ incentive to embrace and fully understand the concept.

Low discernment for quality and increased potential for palm substitutes:

When asked what qualities make a good palm, one manager of a wholesale operation stated that a palm should be a nice green color without brown or yellow spots. When asked if florists demand specific qualities when ordering palms the wholesaler stated they do not. However florists have refused palm orders upon inspection due to the low quality of the palms. Both wholesale managers stated that some customers have spent considerable time rummaging through boxes of palms to find the “perfect” palm. However, opinions differ widely, as exemplified by the contrasting comments of another manager, when asked what qualities customers look for in palms: “they’re looking basically just for price...as long as it looks like a palm”. Improved storage and quicker turnover time were self-regulating strategies proposed by one manager to improve palm quality. Rapid turnover of palms enhances color and structural integrity of the palm by preventing aging spots and wilting tips. In addition to refrigeration this is the most effective way to maintain palm quality for customers. He suggested that IPF source palm products elsewhere when their palm quality is low.

Based on the multitude of uses and symbolic manifestations of the palms I asked respondents if they requested specific qualities when ordering palms, so that the palms they receive will adequately meet the needs of the church and the use of palms as a symbolic tool. Thirty-five percent of survey respondents stated that they did not request specific qualities when buying palms. Of the survey respondents that indicated desirable qualities appropriate palm size (49%) was noted as the most important palm quality and vibrant color (36%) was noted as the second most important palm quality (see table 8 below). One interview respondent stated that such qualities, vivid color in particular, was important in creating and delivering the message of Palm Sunday. “You know it’s the feeling received from seeing [the palm], so if I had a bunch of dead palms up there it surely would not give the type of feeling
that I’d want the people to have…you definitely want green that represents life instead of brown”.

When asked about specific qualities when ordering palms, another interview respondent stated, “sometimes I think last year they (palms) looked kind of yellow, but you definitely want green that represents life instead of brown”.

Table 9. Qualities survey respondents look for in fronds and blades when used in Palm Sunday celebrations.

<table>
<thead>
<tr>
<th>Quality</th>
<th>Percent of respondents which indicated concern for the noted quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last Long</td>
<td>14.7% (11)*</td>
</tr>
<tr>
<td>Vibrant Color</td>
<td>36.0% (27)</td>
</tr>
<tr>
<td>Size:</td>
<td></td>
</tr>
<tr>
<td>Length</td>
<td>21.3% (16)</td>
</tr>
<tr>
<td>Width</td>
<td>10.7% (8)</td>
</tr>
<tr>
<td>Big</td>
<td>13.3% (10)</td>
</tr>
<tr>
<td>Small</td>
<td>4.0% (3)</td>
</tr>
<tr>
<td>Strength</td>
<td>20.0% (15)</td>
</tr>
<tr>
<td>Smell fresh</td>
<td>1.3% (1)</td>
</tr>
<tr>
<td>Leafy</td>
<td>1.3% (1)</td>
</tr>
<tr>
<td>No specific qualities are looked for</td>
<td>34.7% (26)</td>
</tr>
</tbody>
</table>

*( ) Indicates actual number of responses. Total exceeds 100% because respondents could choose more than one response.

know we get what we get. They have a standard type that they send you, I think that’s just what we’re stuck with.” Other church representatives expressed similar feelings of powerlessness over their palm supply, expressing the inability to demand particular qualities from palm suppliers. One respondent stated, “we just use what we have.” Churches have a limited number of vendors to buy from, all of which offer similar palm options. Some churches rely on florists to choose palms for them, avoiding any decisions about palm type or quality when ordering. When asked why they use the particular palm frond they use in Palm Sunday services severely respondents stated, “because it is what the florist chose to give us”.

The RSO expressed similar sentiments concerning consumers’ power. When I asked if consumers request specific qualities such as color he stated, “they have no control over the color.” He than stated “we don’t know [what palms will look like], when they get here most of the time when we get it, it looks fine.” Suppliers, as well, feel they cannot control or
demand qualities of the palms they sell. Color is already a quality which dictates present
distribution and processing mechanisms. In order to provide palms with vivid color they must
be fresh, thus rapid turn over is currently employed to deliver palms with vivid color to
consumers. The most sought after quality, suitable palm length, is also accommodated by the
present market chain. Suppliers currently stock a variety of palm species and processed
palms (e.g. palm strips and crosses) in order to adequately accommodate consumers needs.
Thus consumers’ preference for choice in palm size already influences suppliers stock. Both,
color and size will continue to influence palm handling as they always have.

When asked directly about the importance of palms in Palm Sunday celebrations
interview respondents expressed differing beliefs. One respondent stated “you can’t have
palm Sunday without them so [they are] real critical, if you want to have people participate.”
For some churches the symbol of the palm is so important that they will reconstruct palms
from paper, rather than use other plant material. One respondent stated, “if we don’t have the
live palms available we have the kids make look-a-like ones out of construction paper.”
Some said they probably would feel a “void” should the physical presence of the palm be
missing. “It’s very significant, we would feel a void if we did not see those palms somehow
on Palm Sunday…it’s very visual.”

Further it seems that churches do not distinguish between types of palms. Almost no
respondents specifically indicated using Chamaedorea palms. Only two survey respondents
were able to identify the palm they used as a Chamaedorea palm by its trade name, jade.
Only three interview respondents agreed that the photos of Chamaedorea palms I showed
them looked similar to the palms they used. When asked the name of the palm fronds they
used 48% of respondents did not know the name of the palms they used. Twenty-three
percent stated they used a specific palm because the florist had selected those when they
ordered “palms”. This suggests that many church consumers are indifferent to the type of
palm used. If this is the case, the suggestion of switching palm types because of social or
environmental motives may be meet with little resistance.

A major goal of this analysis was to identify the specific qualities in palms desired by
church consumers. By identifying these qualities it was hoped that production mechanism
could be designed to deliver such qualities to consumers. However due to the simple nature
Table 10. Percentage of survey respondents who were able to identify palms used by the congregation for Palm Sunday services by name.

<table>
<thead>
<tr>
<th>Common palm names</th>
<th>Proportion of survey respondents using specified palms*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jade (<em>Chamaedorea</em>)</td>
<td>2.7% (2)**</td>
</tr>
<tr>
<td>Emerald</td>
<td>1.3% (1)</td>
</tr>
<tr>
<td>Bamboo palm</td>
<td>1.3% (1)</td>
</tr>
<tr>
<td>Fan</td>
<td>6.7% (5)</td>
</tr>
<tr>
<td>African palm</td>
<td>6.7% (5)</td>
</tr>
<tr>
<td>Sago</td>
<td>8.0% (6)</td>
</tr>
<tr>
<td>Date</td>
<td>10.0% (8)</td>
</tr>
<tr>
<td>Palm Sunday Palm</td>
<td>18.7% (14)</td>
</tr>
<tr>
<td>Unknown</td>
<td>48% (36)</td>
</tr>
</tbody>
</table>

*Palm names were either identified by myself or written in by respondents
**( ) Indicates actual number of responses

of the palm plant few production strategies exist to improve palm quality in order to add further value for consumers. The limited concern expressed by palm suppliers and consumers for particular qualities suggests that a palm initiative rely more on social and environmental standards when adding value to certified palms. African Palms USA has already proven that adding product value through social standards leads to initiative success. The palm initiative has the potential to maximize demand by focusing market development on more lucrative social and environmental values rather than more illusive consumer demands and production improvements. Thus emphasizing non-physical characteristics of Fair Trade palms such as the social and environmental benefits of the palms is the best strategy to employ when marketing Fair Trade palms to church consumers. The Fair Trade label offers social and environmental values that consumers will likely recognize as more important than color and size. The value of improving palm quality by imposing selection criteria for forest conservation is discussed later.
CHAPTER 3: STRATEGIES FOR DEVELOPING A FAIR TRADE PALM MARKET

In order to counter the impediments highlighted in the chapter above, five additional opportunities have been identified which give significant support to the primary opportunity found in the collaboration of a Fair Trade palm initiative and church outreach programs. The suggested strategies, although implemented at one point in the market chain, have the potential to affect how the remainder of the market chain functions. Discussion as to how and why these opportunities for improvement will aid in the creation of a Fair Trade palm market will follow under each subheading.

The four additional opportunities in developing Fair Trade markets are, first, creating active Fair Trade consumers through education. This strategy has proven effective in all Fair Trade programs. As was evident from interview respondents reaction to the concept of Fair Trade palm, potential exists to expand churches’ consumption of and support for Fair Trade products by increasing their awareness of the product. Second, the ease of distributing certified palms in the United States would facilitate emerging markets access to certified palms. Palm management is fairly standardized and accommodating Fair Trade palms will have little effect on current business management strategies. Fourth, forest conservation methods are significantly advanced by explicitly linking Fair Trade standards to ecological sustainability. By addressing the fundamental issue of low profitability, increased economic returns for collectors from a Fair Trade label would reduce pressures that result in the over-harvesting of palms. A reduction in harvest intensities minimizes forest pressures, resulting in higher quality palms and increased incentives to maintain forest structure in order to continue the harvest of palm. Finally, Mexican land tenure systems and community organization would facilitate the regulation and management of Fair Trade palms.

Creating active Fair Trade consumers through education:

Although limited knowledge of certified floral products has been identified as an impediment to Fair Trade palm markets, the potential exists to increase consumer awareness of such issues through education. One strategy to increase demand for Fair Trade products has been to educate consumers about Fair Trade and available product options. As consumers
become educated about the principles and products of alternative trade, they become active consumers of such products (Strong, 1996). Fair Trade coffee became popular not because of changes in institutional or transnational morality, but because a market was created through corporate campaigns, political (consumer) mobilization, and new producer organizations; institutional and individual tastes were transformed later. (Levi & Linton, 2003). The results of the pilot “eco-palm” project, which sold 5,000 Chamaedorea fronds to churches this Palm Sunday 2005 and the high volume of AP USA sales, are evidence that demand for alternative palm exists. Wholesalers could actively contribute to educating florists and consumers by passing on information about producers and collection practices given to them by IPF. IPF could also provide color displays for wholesale and floral shop fronts in order to facilitate consumer education efforts. Without substantial attempts at consumer education the sale of certified palms could be hindered.

Parallel with increasing awareness is the need to increase consumer choice by, for example, encouraging those outlets already selling palms to churches to carry certified Chamaedorea palms (see Table 6). The specific venues from which consumers buy their palm fronds can restrict the type of palms available to them, as not all suppliers’ carry Chamaedorea palms. Religious Supply Outlets have been suggested as having the potential to reach a large number of palm consumers (CEC, 2002). Creating a niche market for certified palm fronds within RSOs would require that RSOs begin working with Chamaedorea suppliers, if they do not already do so. None of the RSOs or other church palm suppliers included in this study sold Chamaedorea palm fronds. Enticing RSOs to use more suppliers, which would disrupt and possibly increase their current workloads, accounting, and processing procedures, might be problematic. However, one positive point to remember is that Palm Sunday is an annual sales event for RSOs. With proper planning and an increase in staff participation during the arrival, processing, sorting, and delivery of palms, Fair Trade Chamaedorea sales may prove feasible. The most important initial step is to identify and work with RSOs that already sell Chamaedorea and later identifying potential partners to stock certified Chamaedorea palms.

One strategy to reduce market chain links in the United States and increase Chamaedorea sales would be to coordinate church buying practices. Palm purchases could
be best coordinated if Fair Trade efforts worked with churches at the district or national level. At the request or coordination of the member churches within a close geographic area could purchases palms together, creating a large volume sale, where palms could be directly bought from IPF or an area wholesaler who stocks *Chamaedorea* palms. Not only would diocese support help with the coordination of large volume sales linking churches to outlets that specifically sell *Chamaedorea*, they can also help with the dissemination of important information about where to get certified palms and the issues behind the creation of such a label. Four survey respondents and two interview respondents participating in Fair Trade began participating in Fair Trade programs at the urging of the diocese office.

*Ease of Fair Trade processing and distribution in the U.S.*:

Future processing requirements for U.S. wholesalers, if Fair Trade certification were to occur, would not necessitate significant increases in current processing requirements for U.S. suppliers. The regulations and enforcement of Fair Trade rules would require that palms with the Fair Trade label be kept or remain separated from traditional palm fronds in order to regulate and identify certified palms. This would require that palms be separated, from the time they are first cut and sold, to maintain their Fair Trade identity when moving through the market chain. It is likely that certified palms would arrive at U.S. wholesale outlets in packaging that designates them as Fair Trade. Thus the identification and packaging of Fair Trade palms would occur in Mexico by Mexican market chain actors. Therefore U.S. wholesalers will need only to keep the identified boxes of certified palms separated from traditional palms. There would be no apparent additional labor requirements for U.S. suppliers. Therefore, processing restrictions should not prevent U.S. wholesalers and florists from participating in Fair Trade.

Recently IPF supplied the ‘eco-palms’ in the CEC’s 2005 pilot project. The ability of IPF to source and supply such efforts with palms implies that consistent and predictable volumes of Fair Trade or certified palm would likely be available for suppliers if Fair Trade sources were established.

The additional labor and cost required to separate the certified palms from traditional palms would fall on people within exporting nations and/or exporting firms. In order for the
supply of Fair Trade palms to be accommodated, Mexican suppliers must be willing to process, package and separate these Fair Trade palms. Intermediaries in particular must be willing to track, separate, and manage Fair Trade palms from the time of collection to packaging and export. If the current number of actors is to remain within the Mexican market chain such designation and management may be cumbersome. Presently few resources are needed to handle palms other than a vehicle for transport and material to tie palm stems, until palms reach regional exporting warehouses. Resources to identify Fair Trade palms may be lacking at intermediary levels. Also some actors may resist the regulation and inspection of palms, reducing the number of those willing to participate in the Fair Trade process. Processing requirements in the United States may be of little concern, since the majority of work falls on Mexican suppliers.

Explicitly linking Fair Trade and ecological sustainability:

Encouraging collectors to cut fronds of highest quality and forego quantity is a key factor to maintaining healthy and stable populations of forest palms. Intermediaries and exporters classify palms based on frond quality (A. Ríos-Sánchez, personal communication). However palm collectors are not very selective in the palms they collect; they are paid by the amount, not quality, of the palms collected (A. Ríos-Sánchez, personal communication). Due to this discrepancy, vast amounts of palms are culled during the sorting and grading that occurs in processing warehouses. An estimated 40 to 60% of palms are lost in the sorting process at one Guatemalan collection point, resulting in large amounts of wasted fronds (CEC, 2002). A reduction in cut fronds due to imposed quality restrictions at the collecting level based on quality criteria set by a Fair Trade certifying organization might reduce pressures on wild palm populations (A. Ríos-Sánchez, personal communication; CEC, 2002). In addition the Fair Trade label will address the fundamental issue of income insecurity facing palm collectors. Harvest intensities are likely to drop if collectors receive price premiums for palm fronds reducing collector workloads stabilizing their rural economies and creating incentives to maintain forest structure. Under circumstances where the quality and/or the size of NTFPs is important for positive sales, selection criteria can be critical in their management (Endress et al., 2004). Selection criteria must be imposed in the forest and
applied prior to palm extraction in order to effectively relieve pressures resulting from over-
harvesting. As quality standards were not seen to be a factor in consumer selection of palm
fronds, quality standards of U.S. consumers cannot be used as tools to implement more
selective frond selection. However pre-existing frond selection criteria used by
intermediaries in Mexico can be easily imposed at the forest level. Imposing these selection
criteria will function in a similar manner as consumer quality concerns. Critical to the
success of such a system in promoting forest conservation would be ensuring that collectors
are compensated appropriately for cutting and collecting only the fronds that meet selection
criteria.

Pairing Fair Trade with a forest management certification could increase the
ecological sustainability of frond collection. Forest management certification schemes
designed to protect forest ecosystems impacted by economic activities (timber extraction
and/or NTFP harvesting) would provide valuable technical assistance in best management
practices for palm collectors. In addition it would provide explicit regulations in forest
management that the Fair Trade label lacks. Critical for a successful partnership is
identifying a forest management scheme that complements Fair Trade objectives. Caution
should be taken in finding a forest management label that does not operate counter to basic
Fair Trade principles such as the elimination of certification fees. Forest management
certification not only offers increased ecological sustainability but also has vast potential to
increase market appeal of an alternative palm product. In general American consumers are
more likely to respond to and purchase products with environmentally friendly labels rather
than social justice labels.

Collectors have a rudimentary form of palm classification that is used during palm
harvesting (A. Ríos-Sánchez, personal communication). This classification system was not
designed to harmonize collection practices with wild palm population health but rather to
identify leaves valuable in international markets. First collectors search for palms in the
forests of the three popular species, *C. elegans*, *C. oblangata*, and *C. tepijlote*, which
dominate the international market. Once a plant has been located, fronds that are clean and
healthy (i.e., free from fungi, disease, or insect and animal bites) and approximately 40 cm in
length are harvested. Although this is a basic form of classification, it is not in accordance
with any quality standards set by the intermediaries of the area. Intermediaries apply much stricter appearance criteria, often resulting in the loss of large amounts of palm fronds. If intermediaries find 4-5 “bad” leaves in a bundle of one dozen they are likely to discard the entire bunch and forego paying collectors for their efforts. Thus, pressure is placed on collectors to harvest large amounts of fronds should a bundle be rejected by a coyote. Traditionally palm collectors have not known the techniques used by intermediaries to classify palms. Ríos-Sánchez stated that collectors have been demanding this knowledge but have never received it.

In order to enhance palm leaf quality, Ríos-Sánchez suggested that nets be hung above palm trees but below the canopy of taller trees in designated cutting areas. Nets would be used to collect falling leaves, branches and other debris from the tree canopy, which can reduce frond quality. Falling leaves will often compress newly emerging palm leaves together, trapping moisture and encouraging fungi and other diseases to grow. This causes brown or black spots to form on leaves that are unable to complete maturation. Branches that fall from the tree canopy can also crush mature and young fronds or kill the entire palm plant. These nets would be hung from tree trunks of larger trees that shade the palm plants.

Nets can also be used to regulate shade within forests. If palm fronds receive too much sun they will burn, again resulting in black or brown spots on fronds. Under current practices collectors thin select trees to regulate shade for palms and clear leaf litter at the base of palm plants to enhance growing habitat. Some Chamaedorea palms exhibit signs of insect damage in wild populations, but recommendations for insect regulation in the wild do not currently exist (Hodel, 1992). Ríos-Sánchez also suggested that collectors manage collection sites by reducing palm tree numbers in order to reduce plant competition, the spread of disease, and maintain more uniform collection sites. Improving frond quality through management of wild palm will provide collectors with larger quantities of collectable leaves. Consequently both total collection time and the amount of the labor invested by collectors may be reduced.

Studies have found that partially defoliated palms produced twice as many leaves than control palms while totally defoliated palms produced three times as many leaves than control palms (Oyama & Mendoza, 1990; Endress et al. 2004; Endress, Gorchov, Noble,
2004; Flores & Ashton, 2000; Jones & Gorchov, 2000; McKean, 2003). Although the response of *Chamaedorea* and other palms to defoliation is increased leaf production, the new leaves produced are of less marketable quality than those previously harvested (Endress et al., 2004; Jones & Gorchov, 2000). The reduction in leaf quality, noted by shorter leaf length, significantly affects people harvesting palm for sale (Endress et al., 2004). If leaves that grow back are of lower quality, they cannot be sold in international markets, and are thus worth less money or none at all. According to Ríos-Sánchez, collectors are well aware of the effects over-harvesting has on palm quality. However, if prices remain low and collectors continue to be paid by volume and not quality then little incentive exists for them to reduce harvesting intensities.

If those leaves that regenerate after an initial harvesting period are of unmarketable quality, palm collectors are forced to walk greater distances from their homes to find suitable leaves. This often requires collectors to either leave their communal land or re-enter other areas that have been harvested previously (Jones & Gorchov, 2000). Collectors that travel longer distances from *ejido* lands to find other palm sources risk encounters with other collectors, which may result in territorial disputes (Jones & Gorchov, 2000). Currently, collectors in Rio Manso walk between two and five hours (round trip) daily to collect about 10 to 12 grosses (A. Ríos-Sánchez, personal communication).

Issues affecting quality and forest conservation in the communities of San Miguel Chimalapas center around the rehabilitation of previously burned forest communities. The villages were awarded funds and nursery plants to reforest a particular section of forest close to the communities. Due to increased in-fighting amongst the villages concerning money and plant management, these resources have not been effectively applied to improving palm stands.

*Advantages of Mexican land tenure and community organizations to supporting Fair Trade initiatives:*

The political and social construction of *ejidos* and *comunidades agrarias* offers a unique opportunity for a future Fair Trade palm initiative. Mexico’s land tenure system may be extremely amendable to conservation and certification strategies if proper boundaries can
be delineated and regulation imposed along communal boundaries. Bray & Wexler (1996) state that "in the few areas where sustainable land use practices are evolving in the ejido sector, it is market-driven", referring to the production of organic coffee and silviculture practices of small forest communities reaching northern and European niche markets. Many people believe that the benefits derived from forest resources have encouraged ejidatarios and comunidades agrarias to preserve and sustainably manage forest systems (Espinoza et al., 2003).

The social structure of the ejido and comunidad agraria emphasizes democratic association. As mentioned before, titles such as ejidatario do exclude many community members from important community decisions, but it also encourages producer or stakeholder interaction. Within these communities ejidatarios and comuneros have been working together in production and community administration. The history and proven success of such social structures suggests that ejido and comunidades could easily, at least within their own community, create cooperative organizations centered on a profitable forest product. Again Fair Trade regulations will work only with democratically organized producers. Cooperatives need not be confined to one community and would probably serve the constituents best if production and infrastructure resources were consolidated for a general good throughout collecting communities. Cooperative structures could allow palm collectors to regulate and establish a fair price for palms, facilitate direct sales between co-ops and exporters, gain and regulate quality restrictions during collection, and help finance future permits for new cooperative members to gain legal collection rights.

The ability to designate and regulate areas of production or collection is critical for the verification and monitoring of Fair Trade protocols. The high degree of incorporation into PROCEDE means that many community boundaries have been titled, legitimized, and registered with Mexican officials. In addition this means that ejidos and comunidades agrarias are at least aware of the boundaries of neighboring communities and can personally hold those accountable to intrusions should boundaries be crossed. What this means is that opportunistic harvesting by collectors can be better identified and managed by ejidatarios and comuneros. Community members will be more accountable for their actions. Collectors will also have recognized legal title to use in that area, reducing confusion over boundaries
and reducing conflict between communities. However in the sensitive area of the Chimalapas in the county of San Miguel, conflict resolution in PROCEDE incorporation has bypassed local community resolution and goes immediately to external (government) regulation due to the history of contentious land disputes and the high number of comunidades agrarias in the region (Appendini, 2001).

The ways in which communities, particularly in Oaxaca, choose to manage newly titled community lands will greatly affect the future sustainability of resource use and extraction in those communities. As of late many ejidos and comunidades agrarias have incorporated into PROCEDE, yet they still collectively manage previously communal resources such as forest, pasture and water. In fact, forests cannot be subdivided and sold. However communities may chose to invest in joint ventures with outside industries to develop forest industries in valuable sections of their forested lands.

**Conclusion:**

The argument for market-based conservation has proven successful for a variety of products in some ejidos and comunidades agrarias in Mexico. One such example is shade grown coffee systems and their ability to act as refuge for biodiversity while simultaneously securing increased producer incomes. Market-based conservation is a strategy based on the belief that economic growth and environmental integrity are compatible. This strategy is being heavily employed at a time when modernization and privatization were pushed onto Mexican peasants and indigenous peoples via NAFTA, PROCEDE, and other government policies. These changes have begun to alter rural community structure and social relations potentially further undermining the ability of rural forest communities to secure their livelihoods. The compatibility of economy and environment in a free trade market system is questionable. The market is reabsorbing innovative and successful niche markets that have been created to counter the mentality of free market policies, causing the “conventionalization” of alternative markets, again forcing competition between initial small-scale niche production and corporate control, as was the case in organic foods. The ability of market-based conservation methods to simultaneously benefit development and conservation is debatable.
However in an increasingly globalized and market oriented society where people are becoming more and more interconnected through market transactions, market-based initiatives can offer some hope for social justice and environmental movements. Issue is taken not with the accomplishments of these market-based initiatives but the method of implementation. Scholars have raised doubts about the validity of Fair Trade and its ability to circumvent unequal trade relations while employing traditional market actors and channels of trade (Shreck, 2005; Renard 2003; Renard 1999; Murray & Reynolds, 2000). Doubts about the ability of certified non-timber forest products to address issues of rural development and sustainable forest management have also been voiced (Arnold-Michael et al., 2001; Marshall, Newton, Schreckenberg, 2003).

Arguments such as these were put to the test in the movement to certify bananas. Movements to certify bananas began both in the United States and Europe and rapidly diverged from one another as each sought completely different methods of certification and standard implementation. The desire for rapid results, forest conservation, and access to large consumer markets for a “green” product rather than a socially just product pushed Rainforest Alliance to partner with a large transnational corporation in it certification efforts, while the European movement pushed for Fair Trade certification. Currently, both certification schemes are successfully providing benefits to both farm workers and banana growing environments. Each initiative tailored itself to the market that it was forced to work within. U.S. consumers, motivated by environmental protection, eagerly accepted the Rainforest Alliance “ECO-OK” and “Better Banana” seal, while Europeans, concerned more with social injustice are embracing the Fair Trade banana mark.

In the midst of these arguments and multitude of labeling strategies one might ask: Is Fair Trade palm the best method to achieve forest conservation and rural development in Mexico? In order to create a Fair Trade certified palm through which forest conservation is advanced, by addressing issues of producer income insecurity, would require considerable effort by initiative supporters. Impediments to accessing a Fair Trade market will need to be seriously considered before advancing attempts at certification. Of the five major impediments identified by this study barriers created by limited demand for and knowledge of certified floral products coupled with an extended market chain pose the most serious
threat. However opportunities identified in this study are designated as such because their implementation offers serious potential in countering impediments to accessing Fair Trade markets. Employing dual labels such as a forest management certification and the Fair Trade mark would give additional support in overcoming impediments identified in this study. Forest management certification could supplement weak quality and frond selection criteria and offer a “green” label for the U.S. consumers more concerned with environmental than social issues. Limitations of one label could be overcome by another and vice versa. Identifying certification schemes with complementary objectives few overlapping regulations and minimal certification fees could be problematic however dual management strategies should be encouraged.

Finally, my research suggests that a key factor in building successful Fair Trade markets for Chamaedorea palms will involve significant restructuring (and shortening) of the existing market chain. I suggest two primary approaches by which this market chain can be shortened: (1) eliminating actors within the Mexican market chain, or (2) developing palm cooperatives that build direct trade relations with church-affiliated NGOs in the United States, essentially eliminating all or most of the current market chain.

Collapsing the roles of the coyote and regional intermediary would immediately reduce the number of actors in the Mexican market chain; however, the activities previously conducted by these market chain actors would need to be assumed by the communities themselves. Bringing these two points of the market chain into palm collecting communities would facilitate the construction of community capital as collectors learn how the market chain functions and begin to understand their new role within it. Important activities once controlled by intermediaries such as grading and transportation of the palms would be performed by collectors. This new control would allow collectors to appropriate the value and capital generated in palm collection (i.e. their own labor) and trade. The inability of many people to “recover benefits produced by their labor and investments” results in the reduction of human well-being, environmental health, and feelings of empowerment (Valdivia & Gilles, 2001). Empowerment of the people to manage and profit from invested labor in surrounding natural resources, through Fair Trade, will encourage an active role in resource management and conservation creating long-term sustainability. Ultimately, the
development of stable rural economies will reduce the need to mine unstable forest resource thus reducing deforestation and forest conversion. Just as consumers cannot make informed decisions about palm purchases when critical information is lacking, producers cannot address palm management practices when they lack control of the product.

In addition to eliminating two market chain actors, potential exists to severally shorten the palm market chain by creating direct trading channels between collector cooperatives and U.S. NGOs. Just as palm collecting communities have the capacity of assuming the roles of two market chain actors, they are also able to assume the role of exporter. Palm cooperatives can be formed within or across collecting villages. These cooperatives would take on the role of all market actors from coyote to export firm. The role of importer would be given to the NGO. The cooperatives and NGOs would receive special trading status allowing them to bypass traditional market channels and create direct buying channels between the Mexican palm collector and U.S. palm consumer. Again the creation of a palm cooperative would facilitate the construction of community capital, empowering the collector to control his/her labor and forest resources, ultimately encouraging healthy community development and sustainable human-forest relationships.

Of great concern for inhabitants of rural forest communities is protecting their livelihoods. Therefore they seek the extraction of resources that can provide such security. The mechanism which drives palm collectors to increase harvest intensities does not stem from a limited supply of palms but income insecurity (i.e. livelihood insecurity). By increasing the cost of palm fronds through Fair Trade price premiums the fundamental problem of income insecurity created by unequal trade relations both between Mexico and the U.S. and palm collectors and intermediaries are reduced. Therefore greater security is offered through rural livelihood strategies (palm extraction) thus constructing sound and lasting rural livelihoods.

In the beginning of Fair Trade initiatives, consumer support is slow to grow. Yet support from a few dedicated consumers has led to the success of many social and environmental labels. The current target consumer group in the U.S. is small, about 10% of the total Chamaedorea market (‘Churches celebrate’, 2005). However this target group represents a steady market through which Fair Trade palms can gain a strong foothold and
further expand into specialty floral arrangements. Consumer support combined with decades of dedicated agrarian organization, innovation and a pre-existing accumulation of social capital in rural Mexico led to the successful development of Mexico’s organic coffee market (Bray, 2002). It is evident that the accumulation of necessary social capital has begun in some palm collecting communities, where they have sought out international “mercados justos” with the aid of local NGOs. Building from this resolve and not attempting to commandeer it with Northern objectives and management strategies will be critical in developing a new Fair Trade initiative for *Chamaedorea* palms.

Thus we return to the question why should a Fair Trade label be created for the *Chamaedorea* palms? The clearest benefit to be derived from the Fair Trade label is the development of stable rural economies, securing rural livelihoods and reducing the incentive for unsustainable resource extraction. Forest conservation will be advanced when forest dependent communities no longer need to mine forest resources for money but when they are being paid fairly for their forest products moving collectors away from dependence on volatile markets and government policy far from the village sphere of control. The Fair Trade label can address the fundamental issue of income insecurity, through price premiums. As the issues of economic and livelihood security are addressed so too are the underlying factors in deforestation. Of great importance is the potential to advance forest conservation and sustainable rural development in a highly important and vulnerable ecoregion, Southern Oaxaca. U.S. palm suppliers who work with such initiatives will participate in and profit from one of the first Fair Trade certified floral products to enter the United States. Supporting these products will enhance suppliers’ public image as the products popularity increases. And finally, consumers can rest assured that their purchase and use of palm will support social justice and environmental conservation efforts. Consumers will have rightfully attained that “feel good factor” associated with Fair Trade (Raynolds, 2002).

The attempt to boycott free market mechanism in order to preserve the fragile bonds that remain between product, production, producer and consumer is no easy task. Problems lie ahead for a Fair Trade certified palm, but opportunities abound to make changes in how palms are managed, handled and sold. Overall, the analysis conducted in this study suggest that a Fair Trade *Chamaedorea* certification, if appropriately designed and effectively
embraced by key players in the market chain, has the potential to improve producer well-being through increased economic returns ultimately encouraging forest conservation through utilization.
APPENDIX A: LIST OF ACRONYMS

ATO: Alternative Trading Organizations. ATOs work directly with producers to help market Fair Trade products, acting as a mediator between Fair Trade producers and Fair Trade consumers.

AP USA: African Palms United States of America. Non-profit organization that specializes in the trade of pre-made dried palm crosses from Africa.

CINRAM: Center for Integrated Natural Resource and Agricultural Management.

CONAFOR: Comisión Nacional Forestal (National Forestry Commission).

CONSERVA: Consultorios y Servicios Agroambientales. Oaxacan NGO where Albar Rios works. CONSERVA provides assistance in conservation and agroeconomic development in Rio Manso.


IPF: International Palm Fronds. Pseudonym used to maintain respondent identity, refers to a US based palm importing company.

NA CEC: North American Commission for Environmental Cooperation. Acronym has been abbreviated to CEC within the paper.

RSO: Religious Supply Outlet. A supplier of palm fronds and other religious paraphernalia.

SEMARNAP: Secretaría del Medio Ambiente, Recursos Naturales y Pesca (Secretary of Environment, Natural Resources and Fisheries). A Mexican governmental office that regulates the cutting, collecting, selling and transportation of palm leaves.


NTFP: Non-Timber Forest Product. A commercialized forest product other than timber.
WTO: World Trade Organization.
APPENDIX B: SURVEY INSTRUMENT

The role of palms in Palm Sunday services and the potential for Fair Trade palms.

In the following pages you will be asked to answer questions about how your congregation celebrates the Palm Sunday holiday and how and where your congregation buys palm fronds used in those celebrations. Please circle the number or numbers next to the answer you wish to give, unless instructed otherwise. Once completed please return the survey in the envelope provided, no postage is necessary. A space on the back is provided for any additional comments or questions. For questions contact: Vanessa Zajfen, 515 291 2245 or zajfen@iastate.edu

Sponsored by:
Iowa State University
Department of Natural Resource Ecology and Management
339 Science II, Iowa State University
Ames, IA
50011-3221
I. Church Based Environmental & Social Justice Programs:

Q1. Is this congregation involved with any environmentally oriented programs such as recycling, clean-up efforts, etc? (Circle number)
   1. YES
   2. NO (Go to question 4)

Q2. Which type of environmental program(s) does your congregation participate in? Please describe below:

Q3. Could you please describe the processes that lead your congregation to become active in environmentally oriented programs?

Q4. Is this congregation involved in community outreach programs?
   1. YES
   2. NO (Go to question 7)

Q5. Which type of community outreach program(s) does your congregation participate in? Please describe below:

Q6. Could you please describe the processes that lead your congregation to become active in social outreach programs?

Q7. Does your congregation serve Fair Trade coffee or other Fair Trade products in church? (Circle all numbers that apply)
   1. COFFEE ONLY
   2. COFFEE & CHOCOLATE
   3. CHOCOLATE ONLY
   4. OTHER, please specify ___________

Q8. How did the congregation become involved with Fair Trade products? Please describe below:

Q9. Does the congregation work with outside organizations in your environmental and social efforts? (Circle number)
   1. YES
   2. NO

II. Palm Use in Palm Sunday Services

Q1. What denomination is your church? (Circle number)
   1. Assembly of God
   2. Baptist
   3. Catholic
   4. Episcopalian
   5. Lutheran
   6. Presbyterian
   7. United Methodist
   8. Other, please specify______________________

Q2. Does your church celebrate the Palm Sunday holiday? (Circle number)
1. YES
2. NO (If NO, please STOP here and return the survey)

Q3. Does your church use fresh palm fronds in Palm Sunday services? (Circle number)
   1. YES
   2. NO

Q4. Does your congregation use other plant material in addition to, or as a replacement for palms fronds in Palm Sunday services? (Circle all numbers that apply)
   1. PLASTIC PALM FOLIAGE
   2. SILK PALM FOLIAGE
   3. PRE-MADE ORNAMENTS FROM PALM
   4. FERNS
   5. AFRICAN PALMS U.S.A.
   6. OTHER, please specify ____________________________
   7. NONE AT ALL (Please STOP and return the survey)

Q5. Does your congregation use more than one type of palm plant in Palm Sunday services?
   1. YES
   2. NO

Q5a. How are the two palms different? (Circle all numbers that apply)
   1. DIFFERENT SIZES
   2. DIFFERENT SPECIES
   3. OTHER, please specify ____________________________

Q6. Does your congregation save palm fronds to bum for Ash Wednesday? (Circle number)
   1. YES
   2. NO

Q7. What are palms used for in Palm Sunday services? (Circle all numbers that apply)
   1. REENACTMENTS
   2. CHILDREN'S ARTS AND CRAFTS
   3. PROCESSION ORNAMENT
   4. CONGREGATION MEMBER ORNAMENT
   5. DECORATION
   6. SERMON TOOL
   7. MEDIUM TO CONVEY A MESSAGE
   8. OTHER, please specify ____________________________

Q8. How are palms used in Palm Sunday services? (Circle numbers that apply)
   1. TURNED INTO ORNAMENT
   2. WAVED BY CONGREGATION
   3. OTHER, please specify ____________________________

Q9. Which congregation members use the palms in services? (Circle all numbers that apply)
   1. ENTIRE CONGREGATION
   2. CHILDREN ONLY
   3. ADULTS ONLY
   4. CHOIR
   5. PROCESSION PARTICIPANTS
   6. STAFF ONLY
   7. OTHER, please specify ____________________________

Q10. What part of the palm is used in service celebrations? (Circle all numbers that apply)
    1. ENTIRE FROND
    2. SINGLE BLADE CUT FROM FROND
    3. BOTH
    4. OTHER, please specify ____________________________
Q11. How significant is the role of the palm frond in Palm Sunday festivities? (Circle number)
   1. CRITICAL
   2. VERY IMPORTANT
   3. IMPORTANT
   4. NOT IMPORTANT

III. Palm Purchases and Production

Q1. Does the church provide palm fronds for members? (Circle number)
   1. YES
   2. NO

Q2. Where does the church buy palms for Palm Sunday? (Circle all numbers that apply)
   1. LOCAL FLORIST
   2. FLOWER WHOLESALER
   3. CHURCH DISTRIBUTOR
   4. UNKNOWN
   5. OTHER, please specify ____________________________
      (Go to question 5)

Q3. Do congregation members supply their own palm fronds? (Circle number)
   1. YES
   2. NO
      (If NO, go to question 5)

Q4. Where do congregation members buy palms for Palm Sunday? (Circle all numbers that apply)
   1. LOCAL FLORIST
   2. FLOWER WHOLESALER
   3. CHURCH DISTRIBUTOR
   4. UNKNOWN
   5. OTHER, please specify ____________________________

Q5. What is the name of the palm(s) used by your congregations? (Circle all numbers that apply)
   1. CAMEDOR
   2. SAGO
   3. DATE
   4. AFRICAN PALM
   5. PALM SUNDAY PALM
   6. UNKNOWN
   7. OTHER, please specify ____________________________

Q6. Why do you use that (those) particular palm(s)? (Circle all numbers that apply)
   1. IT IS THE ONLY PALM (S) OFFERED
   2. WE HAVE ALWAYS USED THAT PALM
   3. THE FLORIST CHOSE THEM
   4. OTHER, please specify ____________________________

Q7. Have you had problems with palms that were not good? (Circle number)
   1. YES
   2. NO (Go to question 10)

Q8. What was the problem(s)? (Circle all numbers that apply)
   1. POOR COLOR
   2. HAD DARK SPOTS
   3. LIMP
   4. DID NOT LAST LONG
   5. SMELLED BAD
   6. OTHER, please specify ____________________________
Q9. How did the bad palms affect the congregation's ceremony? (Circle all numbers that apply)
   1. COULD NOT USE PALMS
   2. HAD TO SUBSTITUTE OTHER PLANT MATERIAL
   3. COULD NOT BURN FOR ASH WEDNESDAY
   4. NO DECORATIONS INSIDE CHURCH
   5. OTHER, please specify_________________________

Q10. Is the congregation aware of where palm fronds are grown? (Circle number)
   1. YES
   2. NO

Q11. Is the congregation aware of how palm fronds are grown? (Circle number)
   1. YES
   2. NO

Q12. Do you think congregation members would be interested in knowing more about how and where the palms used in Palm Sunday services are grown? (Circle number)
   1. YES
   2. NO

Q13. If the congregation became aware that the palms it used were produced in an “unsustainable” manner that was environmentally damaging and economically unfair for collectors, would it have any interest in purchasing “sustainable” palms, which are certified to be environmentally friendly and profitable for collectors? (Circle number)
   1. YES
   2. NO

Q14. Would churches or individuals be willing to pay more for “sustainable” palms? (Circle number)
   1. YES
   2. NO

Q15. What is the most that your congregation would be willing to pay for each certified frond, per frond? (Circle one)
   LESS 10¢ 25¢ 50¢ 75¢ 90¢ 1$ MORE

Q16. When buying palms it is important to order palms which: (Circle all numbers that apply)
   1. LAST LONG
   2. HAVE VIBRANT COLOR
   3. ARE LONG
   4. ARE WIDE
   5. ARE BIG
   6. ARE SMALL
   7. ARE STRONG
   8. NO SPECIFIC QUALITIES ARE LOOKED FOR
   9. OTHER, please specify_________________________

Q17. Do suppliers deliver palms to the church? (Circle number)
   1. YES
   2. NO

Q18. Where do you go to pick up the palm fronds?
   Please specify__________________________________________

Q19. How long before Palm Sunday do palms arrive at the congregation?
   1. THE DAY OF
   2. THE DAY BEFORE
   3. THE FRIDAY BEFORE
   4. A WEEK BEFORE
   5. OTHER, please specify________________________________
Q20. How do you keep them fresh until they are used? (Circle number)
1. REFRIGERATE THEM
2. KEEP THEM IN PACKAGING
3. PUT IN A COOL DARK PLACE
4. LEAVE OUTSIDE
5. OTHER, please specify _______________________

Q21. Please indicate issues you believe to be either a problem or benefit when purchasing palm fronds in a bulk fashion:
(Place a check mark on the line next to the issue under the heading you feel it falls under)

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Q22. How many palm suppliers does your congregation buy from?
1. ONLY ONE
2. TWO
3. OTHER, please specify number _______________________

Q23. How long has the congregation been using this (these) suppliers?
Please specify number of years: _______________________

Q24. How are orders placed? (Circle all numbers that apply)
1. OVER THE PHONE
2. FROM A CATALOG
3. INTERNET
4. STANDING ORDER
5. OTHER, please specify _______________________

Q25. When ordering palms do you order? (Circle all numbers that apply)
1. AN ENTIRE FROND
2. BLADES CUT FROM FRONDS
3. BOTH

Q26. Can you please estimate the number of fronds or blades the congregation purchases for Palm Sunday services?
Please specify with a number: _______________________

Q27. How much does it cost the congregation to purchase the amount of palm fronds and/or blades indicated above?
Please specify with a dollar amount: _______________________

Q28. How many registered members belong to your church?
Q29. How many members regularly attend Sunday services?
Please specify ____________________________________________

Q30. Flower arrangements used in weddings and funerals are supplied by:
1. THE CHURCH
2. MEMBERS
3. BOTH

Q31. Are church supplied arrangements bought from the same florist or wholesalers who supplies the congregation’s palms?
1. YES
2. NO

Q32. Where are flower arrangements bought by congregation members for funerals and weddings? (Circle all numbers that apply)
1. LOCAL FLORIST
2. SAME SUPPLIER AS PALMS
3. UNKNOWN
If there are any answers you wish to clarify or if you have any additional comments you would like to add, please do so in the space provide below. Thank you for your response; your participation is very much appreciated.
March 28, 2005

Dear Reverend,

Thank you for taking the time to open our letter. Your congregation was selected to participate in a research project concerning traditional Palm Sunday celebrations and the means of buying palm fronds. It is important for our study to recognize the diversity of commemorative practices found in Christian congregations throughout the United States. It is also critical for us to know from where, how and why you are buying the palm fronds used in Palm Sunday celebrations.

Many programs aim to help citizens of underdeveloped nations succeed in business endeavors while protecting their environment. A prominent example is the Fair Trade™ label, which guarantees agricultural producers a minimum wage for their products, secures a safe working environment, and encourages environmental stewardship. Churches worldwide were some of the first institutions to support Fair Trade™ for crafts, coffee, and chocolate. They represent a unique group supporting programs that help people to help themselves. It is due to this unique progressive action on their part that this project seeks your perspective in an effort to understand the current market and uses for tropical palm fronds. The questions in this survey will cover issues described above, and answers given will be applied to gain a detailed understanding of Palm Sunday services and palm buying patterns of U.S. congregations. This information will be used to look at how these factors may affect the creation and the sales of a new Fair Trade™ label for palms.

If possible this questionnaire should be completed by a staff member who orders palms and is aware of how your congregation traditionally celebrates Palm Sunday. The questionnaire should take 30 minutes to complete. Participation is voluntary, though we hope you will complete the questionnaire. Your answers will remain confidential. This questionnaire has been identified with a mailing number for that purpose. The congregation name and your own will not be identified in our final report. If you have any questions regarding completing the survey please contact me at: 515 294 2245 or zajfen@iastate.edu.

Thank you for your assistance,

Vanessa Zajfen
Graduate Research Assistant
APPENDIX C: INTERVIEW SCRIPT - CHURCHES

ENVIRONMENTAL V. SOCIAL OUTREACH PROGRAMS

1. Is this congregation involved with any environmentally related programs such as recycling, clean-up efforts, etc? If so which and how many?

2. Why did your congregation become involved in environmentally oriented programs?

3. How did your congregation become involved in environmental programs? What were the first steps taken to meet those environmental goals?

4. Who in the congregation participates in environmental programs? (Children, staff, adults, all)?

5. Is this congregation involved in any social justice programs, such as fair trade coffee, donations to underprivileged nations, home building in under developed nations?

6. Why did your congregation become involved in social justice programs?

7. How did your congregation become involved in social justice programs? What were the first steps taken to meet those social justice goals?

8. Who in the congregation participates in social justice programs? (Children, adults, all, staff)

9. Which sort of program (social or environmental) is mostly likely for your congregation to participate in?
10. Why do you feel that way?

8. Do you feel you participate in programs that support both environmentally and socially positive objectives? Which?

9. Does the congregation work with outside organizations in your environmental and social efforts? Who?

10. If you are not participating in any of these programs is there a specific reason why?

11. If you are looking into these programs at the moment why?

USES:

Q1. What denomination is your church?
   1. Assembly of God
   2. Baptist
   3. Catholic
   4. Episcopalian
   5. Lutheran
   6. Presbyterian
   7. United Methodist

Q2. How many members belong to your church (# of church attendees)?
   1. Less than 100
   2. Greater than 100
   3. Less than 200
   4. Greater than 200
   5. Other, specify

Q3. Does your church celebrate the Palm Sunday holiday?
   1. Yes
   2. No   (IF NO, Thank you! Stop!)
Q4. Does your church use fresh palm fronds in Palm Sunday celebrations?
   3. Yes
   4. No

Q5. If you do not use palms in Palm Sunday celebrations what plant foliage, if any, do you use in Easter week celebrations?
   8. Artificial palm foliage (plastic, etc)
   9. Pre-made ornaments from palm plants
   10. Other plant material, if so what ______________

Q6. Does your church conduction celebrations during the entire Easter Week after Palm Sunday?
   1. Yes
   2. No (Go to Question 7)

Q7. Are palms incorporated into celebrations during Easter week celebrations after Palm Sunday?
   1. Yes
   2. No (Skip next Question)

Q8. In which festivities during Easter Week, other than Palm Sunday, are palms used by the church or it’s members?
   1. Maundy Thursday or Holy Thursday
   2. Good Friday
   3. Holy Saturday
   4. Other, Please specify________________________

Q9. How are palms incorporated into Palm Sunday celebrations? (USES)
   (Are special lessons, examples, stories, etc. used or made via the palm frond?)
   1. Through story telling
   2. Through re-enactments
   3. Children’s arts and crafts
   4. Religious sermon
   5. Decoration

Q10. How are palms used in Palm Sunday festivities? OR What role does it play?
    1. Turned into an ornament
    2. Used as a craft tool
    3. Display only

Q11. Is the entire palm used in church festivities?
1. Yes (Skip next Question)
2. No

Q12. What part of the palm is used in festivities?
   1. Leaves of the frond only
   2. A portion of the stem and leaves of the frond
   3. Stem only

Q13. Are there symbolic differences between waving an entire palm frond during Palm Sunday festivities and waving and/or wearing a cross during the Palm Sunday festivities?

Q14. Is it important to use historically/religiously accurate palms in Palm Sunday celebrations?

Q15. Which congregation members use the palms in festivities? (Who are the main participants in church celebrations involving palms? [Children, adults, group leaders])
   1. All congregation members
   2. The pastor/bishop/priest only
   3. Children only
   4. Adults only

Q16. How significant is the role of palm plant material in Palm Sunday festivities?
   1. Critical
   2. Very Important
   3. Important
   4. Not Important

Q17. Do celebration practices change from year to year?
   1. Yes
   2. No

Q18. Does your congregation use more than one type of palm species?
   1. Yes
   2. No

Q19. Do you know which specie(s) of palm is (are) used in Palm Sunday festivities?
   1. Yes
   2. No (Skip next Question)

Q20. What type of palm is used in your festivities (name)?
SHOW PICTURE OF PALMS HERE

Q21. Why do you use those palms?
   1. They are the only palms offered
   2. The congregation feels they are a superior palm because they:
      a. Last long
      b. Vibrant in color
      c. Big
      d. Strong
      Circle those that apply
   3. We have always used this palm
   4. Other, ____________________

Q22. Does your church put on weddings and funerals at your church’s location?
   1. Yes
   2. No (Skip to Question 23)

Q23. Does your congregation supply flower arrangements for wedding or funerals?
   1. Yes
   2. No (Go to Question 23)

Q24. Are these arrangements bought from the same florist or wholesalers who supplies your palms?
   1. Yes (Skip next question)
   2. No

Q25. Where do you purchase arrangements?

Q26. Do congregation members purchasing arrangements buy from the same florists?

PURCHASES:

Q1. Who is buying palms used in Palm Sunday celebrations?
   1. Individual congregation members
   2. A church representative
   3. Other, please specify ____________________

Q2. Where does the church (or rep) buy palms for Palm Sunday?
   1. Retailer
   2. Wholesaler
   3. Church distribution centers
4. Palm importers

Q3. What is the title of the person buying the palms for the church?
   1. Priest/Pastor/ETC.
   2. Group activity organizer/leader
   3. Other, please specify ______________________

Q4. How are palms sold to you?
   1. In large bundles
   2. As individually priced fronds

Q5. Are there any problems/inconveniences when purchasing in bulk fashion?
   1. Price
   2. Set units of sale
   3. Quality
   4. Delivery or Pick up methods
   5. Packaging
   6. Quantity

Q6. What are the benefits of purchasing palms in bulk this fashion?
   1. Price
   2. Set units of sale
   3. Quality
   4. Delivery or Pick up methods
   5. Packaging
   6. Quantity

Q7. How long has the church been buying palms for congregation members?

Q8. Do you buy from one palm supplier or a variety of palm suppliers?
   1. Only one supplier
   2. More than one supplier
   Other, please specify number of suppliers ______________________

Q9. Do you buy palms from the supplier’s place of business (physical store)?
   1. Yes (Skip next Question)
   2. No
(Does the buyer see the palms before buying)

Q10. Do you order through a catalog?
    1. Yes (Skip next Question)
    2. No

Q11. Is that catalog order place via telephone or Internet?
1. Phone
2. Internet
(Medium through which they buy)

Q12. Can you estimate the amount of palms your church purchases for Palm Sunday festivities?

Q13. Can you estimate the cost of buying those palms?

Q14. Are there specific qualities you look for in palms when buying them?
   1. Color
   2. Size (overall)
   3. Length
   4. Freshness
   5. Fair price
   6. None

Q15. Do you know how or where the palms you buy are grown?
   1. Yes
   2. No

Q16. Would buyers of palm on behalf of church members be interested in knowing more about how and where the palms they buy are produced?
   1. Yes
   2. No

Q17. If (your) church knew that the Palms were produced in an “unsustainable” manner that was environmentally damaging and economically unfair for collectors, would you have any interest in purchasing “sustainably” produced Palms, which are environmentally friendly and profitable for collectors?
   1. Yes
   2. No

Q18. Would churches or individuals be willing to pay more for “sustainably” produced palms?
   1. Yes
   2. No

Q19. What is the most that your congregation would be willing to pay for each certified frond, per frond? (Cents)

   10  20  30  40  50  60  70  80  90  100  110

PALM SOURCES AND SUPPLY ISSUES:
1. Have you had problems with palms that were not good?

2. What was the problem(s)?

3. Why were they not good?

4. What is a good palm?

5. How did there lack of quality/their badness affect your churches ceremonies?

6. What did that mean for the ceremonies, how did it impact the ceremonies and the congregation’s uses of palms?

7. Have you ever had to change suppliers? Why?

8. How long have you been working with your current palm supplier? Why/Why not have you remained with that supplier for so long?

9. Does your palm supplier supply other products besides palms? What?

**FOR AFRICAN PALMS USA CONSUMERS:**

1. Has your congregation bought palms from other sources before?

2. From where?

3. In what quantity?

4. What types? (Fresh, pre-made ornaments, large fronds, species)
5. Why did you switch to AP USA?

6. How did you learn about AP USA?

7. How has the congregation felt about the switch from fresh palm fronds to dried per-made crosses? (Attitude)

8. Has the switch affected the way your congregation celebrates Palm Sunday? (No more weaving at church, no more decorations in church with large fronds?)

9. How has it affected your PS ceremonies?

10. How was PS celebrated in your congregation before buying from AP USA?

11. Are there symbolic differences between waving an entire palm frond during Palm Sunday festivities and waving and/or wearing a cross during the Palm Sunday festivities?

12. Does it cost you more to buy from AP USA than your previous suppliers?

13. Was increased cost a problem when you switched to AP USA? If yes how did your congregation overcome that issue?

14. Was it necessary to explain to congregation members what AP USA was?

15. Was it necessary to explain why you had switched to AP USA?

16. Are congregation members aware of what buying from AP USA does for African families?

17. How were they informed about these issues?

18. Are these palm crosses burned and used for Ash Wednesday?
19. If not, where do you get your ashes for Ash Wednesday from?

20. Does that cost anything?

22. Are the palms mailed directly to your congregation?

23. Are they blessed when they arrive?

24. What issues do you feel have become easier by using AP as a supplier?

25. What issues do you feel have become a problem since switching to AP USA as a supplier?
APPENDIX D: INTERVIEW SCRIPT - SUPPLIERS

Q1. What is your title?
   1. Retailer worker
   2. Wholesaler worker
   3. Retail business owner
   4. Wholesale business owner
   5. Importer
   6. Manager
   7. Owner
   8. Other ___________________________

Q2. Do you sell individual palm fronds, not in floral arrangements?
   1. Yes
   2. No

Q3. What types (species) of palms do you sell?

Q4. Do your religious palm customers ask for the exact palm used at the time Jesus entered Jerusalem?
   1. Yes
   2. No

Q5. Is a "historically accurate" palm important to Christian denominations you work with?
   1. Yes
   2. No

Q6. Have you previously supplied other types (species) of palms?
   1. Yes, which _____________
   2. No

Q7. In what type of sales unit(s) do you buy palms?
   1. Bundles
   2. Individual leaves
   3. Floral arrangements
   4. Other ____________________________ (specify)

Q8. If you buy palms in bundles, how many palm fronds come in a bundle?
   1. 25 fronds
   2. Less than 25 fronds
   3. 144 fronds
   Other, please specify _____________
Q9. What is the cost of one unit of palm that you buy?

Q10. In what type of unit(s) do you sell palm fronds?
   1. Bundles
   2. Individual leaves
   3. Floral arrangements
   4. Other ____________________________

Q11. Which is the most common unit of sale?
   1. Bundles
   2. Individual leaves
   3. Floral arrangements
   4. Other ____________________________

Q12. If you sell palms in bundles how many palms fronds are in a bundle you sell?
   1. 25 fronds
   2. Less than 25 fronds
   3. 144 fronds
   4. Other, please specify ______________

Q13. What is the cost of one unit of palm sold?

Q14. Who is buying your palm fronds (who do you sell palms to)?
   1. Florist
   2. Wholesalers
   3. Individual people
   4. Church members

Q15. Do you sell plant foliage at a retail site (store)?
   1. Yes (Skip to Question 18)
   2. No

Q16. How do you sell your palms?
   1. Catalog orders
   2. Phone orders
   3. Internet orders
   4. Standing orders
   5. Other, please specify
   Circle any that apply

Q17. Do your catalogs or Internet sites have pictures of the palms the congregations might buy?
1. Yes
2. No

Q18. Do you know how your customers are using the palms they buy from you?
   1. Yes, If so, how? ____________________________
   2. No

Q19. How often in a year do you just sell individual palm fronds, not in arrangements?
   1. Daily
   2. (Once a week) Weekly
   3. (Once a month) Monthly
   4. (Once a year) Yearly

Q20. What characteristics do you believe your customers are looking for in the palms you provide?
   1. Large size
   2. Vivid color
   3. Freshness
   4. Long frond length
   5. Good price

Q21. Do you feel one characteristic is more important to your client(s) than another, if so which?
   1. Large size
   2. Vivid color
   3. Freshness
   4. Long frond length
   5. Good price

Q22. Do you feel you adequately meet your customers palm demands?
   1. Yes
   2. No

Q23. Has demand for palms changed in recent history?
   1. Demand has increased
   2. Demand has decreased
   3. Demand has remained constant
   4. Customers want different species of palms

Q24. Has the use of palms changed in recent history?
   1. More palms are used in floral arrangements
   2. Less palms are used in floral arrangements
   3. Sales have increased in individual palm fronds
   4. Sales have decreased in individual palm fronds
5. Increased use of potted palms
6. Decreased use of potted palms
7. No change
8. Other, please specify ________________

Q25. Have *consumers* of palms changed in recent history?
1. Increased sales to supermarkets
2. Decreased sale to supermarkets
3. Increased palm frond sales to individuals
4. Decreased palm frond sales to individuals
5. Florist purchases increased
6. Florist purchases decreased
7. No change
8. Other, please specify ________________

Q26. How do you stay current with trends in floral design and use?
1. Magazines and/or design media(s)
2. Floral show exhibits
3. Supplier options/floral availability

Q27. Do floral industry trends affect palm sales?
1. Yes, how so ______________________
2. No

Q28. Are there means by which you can improve the palm fronds, which you supply?
1. Quicker turnover time
2. Better storage
3. Provide different varieties of palms
4. Other, specify ______________________

Q29. Are there any areas of improvement, *outside* your control, that you would like to see improvements in for palms?
1. Transportation
2. Delivery frequency
3. Storage in route
4. Quality of the plant itself, if so what?

Q30. Do you supply/sell any Fair-Trade or organic floral products?
1. Yes
2. No (Skip to Question 33)

Q31. What sort of Fair-Trade or organic floral products do you sell?
1. Flowers only
2. Cut greens only (filler)
3. Both
4. Other, please specify ____________

Q32. How do you advertise your Fair-Trade or organic floral products?
   1. Do not advertise the information
   2. Labels on the bucket
   3. Advertisements in media
   4. Window displays
   5. Other ____________

Q33. Does your supplier regularly supply you with Fair-Trade or organic floral products?
   1. Yes
   2. No

Q34. Can a supplier you use regularly supply you with Fair-Trade or floral products?
   1. Yes
   2. No

Q35. If your customers wanted to buy a fair-trade palm product would you be able to provide them with one now?
   1. No
   2. Yes, I have a supplier available
   3. Yes, I could find a supplier

Q36. If you are unable to provide one would you be willing to provide one if a fair-trade palm source were available to you?
   1. Yes
   2. No

Q37. Is there a source of Fair-Trade or organic palms available for you?
   1. Yes
   2. No

Q38. Have you ever looked into sourcing Fair-Trade or organic palms for churches?
   1. Yes
   2. No

Q39. How are palms packaged when you buy them?
   1. Roped at stem
   2. Rubber band at stem
   3. Plastic covering
   4. In a box with plastic covering
   5. Cardboard box
   6. No packaging at all

Q40. Who/what company do you get your palms from?
   Please specify
Q41. Do you know the name of the company or person who supplies your supplier with palm fronds?
  1. Yes, ___________________
  2. No

Q42. How long have you been buying palms from your supplier?
  1. Under a year
  2. Over a year
  3. Under five years
  4. Over five years

Q43. How long have you been selling palms?
  1. Under a year
  2. Over a year
  3. Under five years
  4. Over five years

Q44. Do you know where the palms you buy were grown?
  1. No
  2. Yes:
     a. Mexico, only
     b. Guatemala, only
     c. Both Mexico and Guatemala
     d. Central America
     e. South America
     f. Greenhouse in USA
     g. Other________________________

Q45. Do you know how they were grown?
  1. Yes
  2. No (Skip next question)

Q46. How were they grown?
  1. Collected in the wild
  2. Grown in a plantation under other valuable shade trees
  3. Mono-cropped
  4. Greenhouse production
  5. Other, please specify____________

Q47. Are negative environmental production methods of palms, such as forest degradation, or negative social justice issues, such as under paid palm collectors, a concern for you?
  1. Yes
  2. No

Q48. Is it a concern with other plants you sell?
1. Yes
2. No

Q49. If your company became aware of negative environmental (loss of forest) and social impacts (exceptionally low wages to producers/collectors) from growing or collecting palm fronds would your company be willing to supply one, which could guarantee safer environmental and social conditions of production?

1. Yes, only if it did not cost us anything
2. Yes, we would be willing to pay more for such fronds
3. No

Q50. Has the price you pay for palms fluctuated throughout the years?
1. Increased
2. Decreased
3. Stayed the same

Q51. Have you changed your selling price of palms throughout the years?
1. Increased
2. Decreased
3. Stayed the same

Q52. What portion of your company’s sales/profit comes from palm sales? Please specify, ________________________________

Q53. Do you prefer one type of palm to another?
1. Yes
2. No

Q54. Which species of palm do you prefer and why?

Q55. Are you the only supplier/retailer of palm in the area?
1. Yes
2. No

Q56. How many palm suppliers/retailers are in the area that you are aware of?
1. Under five
2. Over five
3. Under ten
4. Over ten

Q57. How many churches do you supply with palm fronds?
Q58. How many different types of palm fronds?
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