

The Potential Market, and Market and Certification Mechanisms for Palms of the Genus *Chamaedorea*

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Introduction

Palms of the Genus *Chamaedorea* are used extensively in the North American Floral industry primarily as components of floral arrangements and also sold individually for events such as Palm Sunday in Christian congregations. Palms used in the floral industry are harvested in Guatemala and Mexico, the majority of them coming from natural forest areas although in recent years efforts to cultivate them have increased. In many cases, the harvest of the palms and the income they provide has provided a reason for communities to maintain the natural forests which provide the shade the palm needs. Thus the palm and the income it generates is helping preserve natural forests in areas that are threatened by expanding agricultural frontiers. Although the palm helps to preserve natural forest there are also reports of the loss of palm producing areas due to fires and the over harvest – a situation which, if left unchecked could lead to the loss of palm populations and the potential loss of the protective function the palms and their sustainable harvest provide.

In addition to the over harvesting problem, many of the harvested palms are discarded in a grading procedure to prepare them for market with reports of up to 50% or more of the harvested palms being discarded. Although the harvest of the palm is a major source of income for many communities in Mexico and Guatemala, often the greatest benefits are reaped by the contractors who purchase the palm from gatherers and in turn sell it to the companies that process and market the palm. Palm harvest presents issues related to both the sustainable harvest of the palm as well as providing a more equitable distribution of the benefits the palm trade provides. For this reason, the harvest and marketing of palms is being considered for the development of a fair trade/sustainable management process which would link harvesting communities in Mexico and Guatemala with Christian congregations in North America.

The market for palms of the Genus *Chamaedorea* in North America presents some unique opportunities for Fair Trade or a Certification style sale of the palms to certain market sectors addressing sustainable harvest and equitable distribution of benefits issues. Previous work sponsored by the CEC (CEC, 2002) identified religious organizations and specifically Christian congregations as one of the principal markets for palms which are sold individually for Palm Sunday services and as part of floral arrangements used in Weddings and Funerals – all church related activities.

Religious groups have been active participants in Fair Trade efforts coffee being the most prevalent example, but not limited to coffee. Coffee sales to churches are associated with social issues providing fair prices and greater income to the small farmers who produce that coffee and less so with environmental issues. Nonetheless there are a large and growing number of environmental stewardship efforts being promoted by individual Christian denominations as well as organizations that work across denominations and religions.

The palm market contains elements of both the social and environmental issues that may be of interest to churches and, for that reason this study was commissioned to determine the interest Christian congregations may have in purchasing palms through a program that would guarantee a

fair price to producers/gatherers and also guarantee that palms are sustainably harvested. Those congregations make up the bulk of the Palm Sunday market which, taking into account the congregations represented in this study (roughly 60% of total Christian congregations), total 27 million individual palm fronds worth an estimated 2.7 million dollars and 5-10% of the total annual demand for *Chamaedorea* palms in the US.

The work presented here includes:

- Results of a survey of the major Christian Denominations exploring their interest and willingness to pay for a “certified”, “Fair Trade” palm.
- A review of potential mechanisms for marketing the certified/fair trade palms.
- Review and discussion of church groups working with environmental and social equity issues for future contacts.
- Recommendations for the next steps required to initiate a pilot project to market certified/free trade palms¹ in the North American market starting with harvest and following the process through distribution and final delivery to congregations. This will deal primarily with the Palm Sunday market but will also address other potential market outlets.

Methods and process

This work was carried out primarily through a mail survey distributed to a representative sample of the major Christian denominations in North America as they had been identified as the principal market for palms for Palm Sunday. The objectives of the survey were to:

- Determine the size of the market for palms for Palm Sunday.
- Estimate the interest and willingness of congregations to purchase a palm and pay a premium for a palm that would be certified through some process guaranteeing that the palm had been harvested sustainably and that the persons gathering the palm were receiving a fair price.
- Explore congregation’s attitudes towards and experiences with fair trade and environmental issues. A total of 700 surveys were sent out. The sample was distributed to a number of congregations in different denominations. A sample proportional to the total number of congregations in each denomination was selected. Congregations within denominations were selected randomly from lists. The survey procedure was initiated by sending out surveys. This was followed by a postcard to recipients to remind them to fill out the survey. A second survey was sent out if no reply was received. The second survey mailing was followed by a postcard reminder. A total of 276 responses were received. Many of the surveys were sent out over the Christmas holidays which may have limited the number of responses received given that the holidays are a busy time of the year for congregations.

In addition to sending out the surveys, some congregations were contacted individually when preparing the survey to get input on the questions and structure of the survey. Religious organizations working with environmental and social issues were also contacted to learn of their

¹ Throughout this report we will refer to “certified” palms. The certification referred to is not the same type of certification that is presently used for certifying sustainably harvested timber. The exact type of certification is yet to be designed but would represent some kind of agreement between gatherers and purchasers that would guarantee adherence to guidelines for sustainable harvest as well as a more equitable compensation for those gathering the palm. It would also include a system for monitoring compliance.

interest and potential collaboration with efforts to direct market palms to congregations.

Market potential for marketing sustainably harvested “fair trade” palm to and through religious organizations. (Survey results)

The survey had 21 questions starting with general questions about interest in fair trade and environmental issues, leading to more specific questions about interest in participating in a purchase program, the price congregations would be willing to pay and finishing with questions about the size of congregations. (A copy of the questionnaire is included as annex 1.)

The first question asked if the person filling it out believed that palm gatherers should receive a fair price for the palms they harvested and, as would be expected, 99% of the respondents answered that they should with the remainder saying they didn't know. The second question asked if the social or the environmental issue were more important or if they were of equal importance. Originally we had expected that the social issues would be the most important but 83% of the respondents felt that the two issues were equally important while 10% listed the social issues as most important while 3% felt environmental issues were more important, the remainder did not respond. This response has important implications for any program to promote the purchase of a “certified” palm since the results indicate that congregations would respond to both issues. The interest in both issues would also tend to strengthen the case for the purchase of the “certified” palm.

Of the congregations surveyed, 83% indicated that they did purchase palms. When asked if they could name the palm purchased, only a small percentage were able to. From those that were able to name the palm they purchased, it was evident that some of the congregations were purchasing palms that were not of the Genus *Chamaedorea*. This was also evident from some of the responses to questions later in the survey.

Questions five and six asked where congregations purchased their palms and if they had any special arrangements for the purchase of palms. This question provided some interesting responses. The largest percentage responded that they purchased from a local florist (36%) or “other” outlet (38%) followed by local wholesalers (17%). 5% purchased from importers and 4% from producers. Many of the respondents wrote in that they purchased from suppliers of church supplies or an archdiocese in the case of the catholic congregations. This was true of many of the larger congregations. The fact that many churches purchase from church suppliers or from a supply house linked to their denomination suggests that it might be possible to approach those supply houses when developing a program for harvesting a “certified” palm. This could facilitate the marketing and distribution of a “certified” palm as it would allow a program to work with a few large suppliers as opposed to many small suppliers in the cases where that was possible.

In other cases congregations relied on their members to provide the palms or paid members to gather palms for them. Those cases were from the southern states with appropriate conditions for growing palms and may have been palms other than the *Chamaedorea* palm.

Question 7 requested that respondents indicate the number of palms utilized for Palm Sunday. Based on the results of the survey, the total consumption/demand is estimated at 27,135,138 palms or just over 27 million palms with a cost of roughly US\$0.10 per palm² giving a value of US\$2.7 million dollars spent by congregations on palms. At times other than Palm Sunday the

² This was the most commonly mentioned price (mode) when congregations responded to the prices they pay for palms and probably the most reliable given that many of the other answers deviated greatly from that mode.

Congregations purchase an estimated 3,780,000 additional palms bringing the total to almost 31 million palms. In addition to palms purchased directly, palms especially of the genus *Chamaedorea*, are used extensively in the preparation of floral displays for weddings and funerals as a part of floral arrangements.

Species other than *Chamaedorea* are being used for Palm Sunday so not all of the palms indicated in the survey are *Chamaedorea*. Nonetheless, if congregations are interested in the environmental and social equity issues, the purchase of *Chamaedorea* palm by those congregations presently purchasing other palms could be promoted. It was not possible to distinguish the amounts of palms purchased of each species because most congregations sampled were not able to name the palm they purchased.

If the average number of palms purchased by the congregations sampled were projected to all Christian denominations the total purchases could be as high as 45 million palms for Easter Sunday with a value of 4.5 million dollars. Although the survey data did not include information from all Christian denominations and the 4.5 million is not supported by the data, it does give us a rough idea of the total potential demand.

Total *Chamaedorea* palms imported to the US varies between 300 and 350 million per year. Given the results of the survey of congregations, *Chamaedorea* Palms sold on Palm Sunday would likely represent between 5 and 10% of the total annual palm trade. Again, because of the different palms used, it is not possible to come up with an exact figure of the number of *Chamaedorea* palms sold on Palm Sunday.

When asked if they would be willing to pay an additional \$0.10 for the palm fronds, 84% of the respondents said they would. That response indicates: a) they would be willing to pay a higher price than they presently pay; and b) that they would be willing to participate in a certified palm program. As a follow up respondents were asked if they would purchase the same quantity of palms with a \$0.10 increase in price, 82% indicated they would. Those results indicate that the majority of the congregations would be willing to pay nearly double the current price they pay for the "certified" palm. When asked the maximum they would be willing to pay for a fair traded palm, the average of the 105 who responded was \$.39 per palm which is much more than many of them are already paying again demonstrating opportunity for marketing a fair traded palm that could provide producers significant increases in the current price they receive.

There were two questions dealing with the use of palms in weddings and funerals that received mixed responses probably due to the fact that the questions needed better explanations. Palms are included in floral displays for weddings and funerals but usually are not specifically purchased for those events so, it is likely that the respondents were not aware of the use of palms in those floral arrangements. Only 19 responded that they used the palms in weddings, funerals or both. Previous surveys of florists indicated that the number is probably higher. (Current and Wilsey, 2002).

In addition to the question about use in weddings and funerals a question was included about the number of weddings and funerals held in congregations. Responses were received from just over 177 congregations. This response was used to create a trend line to estimate the number of weddings and funerals and develop an equation to predict the number of weddings and funerals as a function of congregation size. This information will be used to estimate the number of palms used.

Congregation members and not the administration purchase flowers for weddings and funerals so to promote the purchase of a fair trade palm for those activities congregation members would have to

be aware of that option. The congregation/pastor/administration could provide information about fair trade palms to their members. We asked respondents if they would be willing to provide that information to the members of the congregation to explore that as another option to promote fair-trade palm. 59% of those who responded said they would be willing to inform their members about the fair trade palm while the other 41% indicated that they would not, most likely because they felt it would not be appropriate since it is a private decision. Nonetheless the majority would be willing to inform members suggesting that this may be another viable means to promote the purchase of fair trade palms. The results are in Table 1 below.

The next set of questions in the survey dealt with the respondents' knowledge of and participation in programs related to fair trade and environmental issues. See Table 1 below. Of those that responded, 27% participate in some kind of fair trade program while 50% are aware of fair trade programs, and 74% participate in some kind of environmental stewardship program primarily related to recycling activities.

Table 1 – Knowledge, participation and interest in Fair Trade and Environmental Programs

Response	Participate in Fair-trade Program		Familiar with Fair Trade Program(s)		Participate in Environmental Stewardship Program		Willing to Inform members about Fair Trade Palm	
		%				%		%
yes	27	10	50	19	74	29	140	59
no	237	90	220	81	185	71	97	41
no answer	14		9		19		41	

Note: Percentages reflect the percentage of responses not the percentage of total surveys sent out. If there was no response to a question, the non-responders were not considered when calculating percentages.

Summary

The survey provided valuable information on congregations understanding of and willingness to participate in a program for “certified” palms which would likely include an increase in the prices presently paid for palms for congregational activities. The following main points summarize the results of the survey:

- Congregations are concerned about fair trade and certification and the social and environmental issues associated with fair trade and sustainable resource management. In addition they are equally concerned about environmental and social issues.
- Congregations purchase their palms from a number of outlets including retailers, wholesalers and importers as well as palms gathered by their members. Some congregations have traditionally purchased from church sponsored suppliers, or suppliers that deal with church supplies. Others deal directly with local wholesalers or retailers.
- The palms purchased on Palm Sunday are a mixture of the Chamaedorea group as well as other palms. Congregations are generally not able to name the type of palm purchased.
- Congregations are willing and interested in purchasing a certified palm and would be willing to pay extra for a certified palm under a scheme that would provide greater income for producers/gatherers and guarantee environmental sustainability.
- Around half of the congregations who responded to the question would be willing to inform their members about certified palm when purchasing palms for weddings and funerals.
- A little over a quarter of the congregations participate in fair trade programs while half of them are aware of such programs. Almost three quarters of the congregations participate in some kind of environmental stewardship program the majority of those programs related to

recycling.

Implications of study results

In general, there appears to be a large potential market for certified palms primarily for Palm Sunday celebrations. Associated with that demand is a willingness to pay a higher price for palm fronds that are certified as providing more equitable payments to palm gatherers and that are harvested under a sustainable management system. The use of certified palms in floral arrangements is another area that can be explored on a pilot basis but would have lower impact and has a less direct connection to social equity and environmental stewardship.

The market potential would justify a pilot scale effort to promote the sale of certified palms. Beyond the market, the logistical elements involved in purchasing and transporting and delivering a relatively perishable product will need to be worked out. This could be done through traditional channels or through a new distribution system such as that developed for fair trade products always ensuring that the palm that is certified comes from a reliable source that will guarantee that the palm marketed is indeed meeting the objectives of the program (social equity and environmental sustainability).

The next steps in the process should be to consult with fair trade programs and religious organizations dealing with social and environmental issues to get input on a plan for marketing and distributing certified palm on a pilot scale from selected communities in Mexico and Guatemala to selected congregations in North America.

Certification and options available for certifying palms

Certification of Non-timber forest products (NTFP)

The idea behind certification and fair-trade of NTFP is quite simple. Currently, under regular trade, the gatherers or producers receive a minimal payment for their work, while most of the retail value is lost to the value chain. Under a fair-trade regime middlemen eating away the profits are avoided. Certified and/ or labeled goods often have a higher price, but by paying a price premium and buying a good with a label of certification the consumers can feel safe the product is managed and harvested in a sustainable manner with a fair price for those doing the harvesting.

There are generally two parts to the answer of the question about which kind of certification is best for our product. First there are a number of certification schemes depending upon which aspect of the production chain you want to certify. This varies from the conditions under which production takes place to the social conditions of the laborers involved in the production and quality standards of the end product. Secondly there are the different labels that can be applied; there are first, second and third party labels in addition to various standards.

Certification Schemes

According to the Forestry division of FAO the certification schemes most relevant to NTFP are:

1. **Forest management certification** mainly assesses ecological aspects of resource management, both at the forest and species/product level. These schemes aim at ensuring the sustainable production of forest resources (Walter, 2002);

Forest management has traditionally been aimed at timber production, but it seems obvious that the same or similar practices can be used for NTFP. For larger and serious forest owners a forest management plan is often an important tool in the production. Following a good forest management plan implies that the forest is being harvested in a sane and sustainable manner. With crop rotation times in regions of the world of more than 75 years, planning is not only important it is required to ensure that future generations can benefit from the resources. There is a place for NTFP in the same planning instrument, especially since most, if not all NTFP can be harvested without harming the timber yielding forest. Smartwood, an organization which is very active in the certification of forest operation for timber production is working on standards for certifying NTFP production from those areas with existing timber certification (Jon Jickling, personal communication).

2. **Social certification**, such as fair and ethical trade, assure that labor conditions are acceptable and benefits are equally shared among those involved in production and trade (Walter, 2002);

Ethical trade ensures that basic labor and human rights standards are fulfilled for workers. Still, the most common form of social certification that has been applied to NTFP is fair trade initiatives however, environmental forces rather than social have driven nearly all the work done in this arena. FLO (Fairtrade Labeling Organization International) is the foremost standard setting institution, but there are also a number of other players in the marketplace.

FINE (an informal organization consisting of FLO, IFAT, NEWS and EFTA) agreed on this widely accepted definition of fair trade in 1999: "*Fair trade is an alternative approach to*

conventional international trade. It is a trading partnership which aims at sustainable development for excluded and disadvantaged producers. It seeks to do this by providing better trading conditions, by awareness-raising and by campaigning." (<http://www.marula.org.za/comfair.htm>)

1. **Organic certification** focuses on agricultural sustainability criteria such as the renunciation of synthetic fertilizers and pesticides. Wild crafted and semi-domesticated NWFP can therefore be considered as organic and many NWFP such as pine nuts, mushrooms, herbs are increasingly commercialized as organic food products (Walter, 2002);

Organic certification is mainly used on cultivated production and the main certification body is IFOAM (International Federation of Organic Agricultural Movements). IFOAM defines "Organic" as: "...various systems for producing food and fibers according to specific standards that promote environmental, social and economic health. These systems take local soil fertility as a key to successful production. By respecting the natural capacity of plants, animals and the landscape, it aims to optimize quality in aspects of agriculture and the environment. Organic agriculture practices sustainability by dramatically reducing external inputs such as chemical and genetically synthesized fertilizers, pesticides and pharmaceuticals."

Further there are explicit specifications NTFP have to comply with under the section "Collection of Non-Cultivated Material of Plant Origin including Honey": "...wild-harvested products shall only be certified organic if derived from a stable and sustainable growing environment. Harvesting or gathering the product shall not exceed the sustainable yield of the ecosystem, or threaten the existence of plant or animal species." In addition to this all products must follow the general guidelines.

2. **Product quality certification** aims at ensuring that defined production standards have been taken into consideration. These standards can focus on the product itself as well as on the way it is processed and manufactured (FAO, 2001) (Walter, 2002).

This last form of certification is most commonly used in food and pharmaceutical industries where specific quality measures are crucial. To verify that standards are met, tests of product identifying purity, efficiency and safety can be taken.

Product quality does not only refer to the physical product, the entire value chain, from production and processing to packaging, shipping and manufacturing, can be quality certified. The standards applicable to this category will most often be product specific only.

Other forms of certification

In addition to the above-discussed certification schemes there are numerous others. This includes aspects of product performance and product origin. Certification of product origin does not tell anything about the attributes or qualities of the product, but merely the geographic area or region the product originates from.

In choosing what or which certification scheme(s) are the preferred one(s) for a certain product, there are several questions to ask. The first and maybe most obvious thing to ask is, what do we wish to accomplish through certification? Then we can ask, given our product, what is most practical? Does our product have attributes requiring quality certification? Do the benefits from certification outweigh the costs?

Labels

We generally talk about three kinds of labels in addition to a set of ISO standards and standards set by other institutions. It is important to know that each label can be used to achieve different goals, and that the cost imposed and the credibility varies greatly.

First Party Label

First party labels are self enforced by the producer. The producer sets the standards for management and production. There is no controlling agency involved in certifying the product, so the consumers are left with the producers promise and their own judgment for believing the producer or not. The cost of such a label will be only marginal, but on the other hand so will also the value of the label. Examples may be cosmetic and personal care products “guaranteed not tested on animals”.

Second party Label

To get a second party label, criteria set by an overarching industry organization of which the producer is a member, or by the government must be met.

Third Party Label

The most important and the only kind of label really accepted as being a certification of any meaning, is the third party label. These labels are issued by independent agencies or NGOs, which inspect the production onsite to verify that all requirements for the certification are met before the label is issued.

Labelling bodies

Over the last years a number of labelling agencies have evolved, a few will be briefly discussed below.

Forest Stewardship Council (FSC)



The FSC is an international non-profit organization founded to support “environmentally appropriate, socially beneficial, and economically viable” management of the world's forests. (www.fscoax.org) The FSC has created a logo that can be used on products to make them easily recognized as coming from a well managed forest. The main focus has been on timber, but the principles and criteria can also be transferred to NTFP. All products carrying the label have been individually certified. There are a number of accredited certification bodies that perform the field work, in the US; Scientific Certification Systems and Smart Wood Program.

Fairtrade Labeling Organizations International (FLO)



“FLO is the only certification system in the world where the producers does not pay for their certification” (www.fairtrade.net) FLO emerged as an umbrella organization formed to unite existing initiatives of fair trade.

International Federation of Organic Agriculture Movements (IFOAM)

Fair trade is defined by the International Federation for Alternative Trade (2002) as "a trading partnership that aims at sustainable development for excluded and disadvantaged producers ... by providing better trading conditions, by awareness raising and by campaigning".

The following table is borrowed from ‘Tapping the Green Markets’ (Shanley et al.)

	FSC	IFOAM	FLO
NTFPs certified or in process	Chicle, maple syrup, baskets, palm hearts	Berries, tea, honey, coffee, mushrooms, ginseng and others,	Coffee, tea, honey, bananas, cocoa
Other products certified	Timber	Organic produce, fish, meats, dairy	Sugar, orange juice
Main historical drivers	Timber users, environmental advocacy groups in late 1980s; concern over deforestation	Organic farmers and organic certification organizations in the late 1960s; consumer concern about health	Producers (seeking market access) and consumers; concern about equity issues in the 1960s
Approach to NTFP standards	General principles and criteria, with region specific detailed standards; NTFP guidelines developed by class on a case-by-case basis	Basic standards with additional section for ‘wild-harvested products’	Product-by-product standards
Current issues	Developing a consistent framework for NTFP certification	Clarifying boundaries with FSC regarding forest product certification, expanding social criteria	Harmonizing criteria and refining certification process; investigating new products for certification
Primary focus for NTFP certification	Ecologically sustainable and socially responsible forestry	Avoidance of exposure to, and contamination by, chemical pesticides and fertilizers	Fair and equitable distribution to producers
Weaknesses	No requirements that NTFP food products are chemical free	Few ecological criteria for treating areas as functioning ecosystems	Narrow focus on trade equity and community well-being

Developing a Pilot Program - Issues

The effort to market *Chamaedorea* to Christian congregations is premised on the idea that one of the best ways to protect natural forests, where the *Chamaedorea* palm is gathered is through market mechanisms. Anecdotal evidence suggests that communities that gather the palm are more likely to protect the forest since it provides a constant and an important source of income for them. The second objective of this effort is to promote social justice by developing a management structure which would provide a greater share of the profits generated by the sale of the palms to reach the communities that gather the palm. To develop such a program requires that mechanisms are put into place that guarantee that the palms are sustainably harvested, that those palms are reaching the congregations without other palms being added in the process and that an efficient marketing and distribution chain are available to get the palm from the forest to the interested congregations in a timely manner.

In this section the following issues will be discussed:

1. Who to work with at the harvest level: In practice there are different options - individual harvesters; contractors; and different types of community organizations.
2. What to market: *Chamaedorea* palms are harvested from different environments from natural growth under natural forest to plantations under planted shade.
3. How to guarantee palms are sustainably harvested: From setting up harvesting guidelines to potentially carrying out research to define guidelines.
4. How to ensure that sustainably harvested palms are reaching purchasers and other palms are not mixed in during the transportation and distribution process: Chain of custody issues.
5. Regulation and licensing issues in country of origin and country of destination.
6. Market issues: Species used, price, quality, and efficient scheduling and distribution.
7. Marketing the sustainable palm: Publicity, standards, education, coordination with existing social justice and environmental stewardship programs and exchanges between congregations and palm-gathering communities.

Who to work with

Presently there are a variety of structures in place to harvest and process palms prior to transport to distributor in the country of origin and export to their destinations. These structures include: a) individual harvesters taking their palms to a local contractor or receiving station; b) contractors who receive requests from exporters or importers who put together crews to do the gathering; and c) community or producer organizations (community concessions in Guatemala, Ejidos and Cooperatives in Mexico) who obtain licenses and receive the palm from their members. The contractor/crew model seems to be the most prevalent although recently more effort has been put into working through existing community organizations. Table 3 below provides some advantages and disadvantages of each of those arrangements.

As becomes apparent from the table, working with a community organization is potentially the most viable option for developing a certified palm program. Community organizations in Mexico and Guatemala some form of guaranteed tenure, they represent an organizational structure that can regulate harvest and act the first link in the marketing chain, and working through such structures helps guarantee a more equitable distribution of benefits and that a greater percentage of the benefits stay in the communities from which the palms are harvested.

One of the most important issues in certifying and being able to guarantee a sustainable harvest is tenure or the authority an entity has to control and manage an area of forest from which the palm is harvested. If there is open access control of harvest would be almost impossible. One of the gatherers might be following a sustainable harvest plan but if other individuals have access to the same harvesting area and come in after those who were using sustainable harvest practices, the harvest quickly becomes unsustainable. To guarantee a sustainable harvest implies control over who does the harvesting and how much and when they harvest.

Table 3 - Who to work with - Options

Arrangement	Advantages	Disadvantages/Issues
Individual gatherer turning palms into a receiving center	Independent gatherer	Very little or no control over sustainable harvest
Contractors working with crews to gather palms	More control over sustainable harvest. Provides established link to purchasers	Contractor receives largest share of profits and provides supplies to crews at elevated prices.
Community organization	More equitable distribution of income if structured adequately. Greater control and ownership over resource and sustainable harvest.	Requires organizational skills to guarantee sustainable harvest and equitable distribution of income.

Land rights under ejido and community concessions arrangements are well defined. The problem is not uncertain tenure but opportunistic behavior within the ejido. Although some communities have made attempts to regulate the harvesting of palms, there are times and circumstances when these regulations are ignored by individual members. This may also be the case under the community concession arrangement. Opportunistic harvesting within ejido or concession arrangements presents a problem to this marketing effort. It threatens the legitimacy upon which this effort is founded. It seems that opportunistic harvesting occurs in times of “emergencies” when people need money for unexpected hardships or when there is an opportunity to take advantage of an increased demand for palms (CEC 2002). In either case, control must be established or no guarantees can be made about the state of the forests from where these palms originate or the state of the larger community’s economic lot.

In Guatemala the Consejo Nacional de Areas Protegidas (National Council for Protected Areas) – CONAP has been working on setting up greater control of the harvest of the *Chamaedorea* palm and licensing community concessions. Some uncoordinated efforts have already been made with limited success. The lack of success has most likely been due to the spotty nature of the efforts and lack of a coordinated effort. Despite the lack of success valuable lessons have been learned that can be applied to future efforts. One of the interesting issues in Guatemala has been the fact that the 25 year concessions awarded to communities include control over all resources in the forests but the Central office of CONAP in Guatemala City continue to award licenses to individuals when supposedly that control has been turned over to the community concession. CONAP is in the process of reviewing their licensing process and right now there is a good opportunity to work with CONAP and the community concessions in setting up guidelines and procedures which would guarantee the sustainable harvest of the *Chamaedorea* palm.

What to market

In addition to determining the organizational structure, a decision needs to be made on what kind of palm to market. Palms grow under a variety of settings. The majority are harvested from the undergrowth in natural forest areas. In the last several years palms are increasingly being harvested from planted *Chamaedorea* in natural and planted forests. In Mexico many communities have also planted palms as an under story species in coffee plantations. Because one of the goals is to create an incentive for local people to preserve standing forests, the highest priority would be given to wild/natural *Chamaedorea* populations growing under natural conditions.

Depending on the demand for the *Chamaedorea* palm, it is possible that with time we will learn that these wild populations are unable to meet demand without being compromised. Therefore, if demand cannot be met from natural populations from natural forest areas, the next priority might be to accept palm from planted populations growing in the shade of natural forests. Communities in the Guatemalan Peten have already started planting in their concession and community forests.

Another option would be to also work with the palms planted into coffee plantations. Because of the current coffee crisis which is resulting in areas previously in coffee being converted to less sustainable land uses, the existence of palms in the under story of the coffee could help save some of those coffee plantings which are serving an important ecological function from being converted to less sustainable uses. This last option can be certified to meet fair trade, organic, and product quality criteria.

All of these palm management options would improve the economic lot of the communities who currently depend on the palm species for part of their subsistence. They also all have the potential to increase the relative value of the *Chamaedorea* palm and protect important natural and planted forest environments and the ecological benefits they provide.

Table 4 Possible management schemes to target

<i>Types of growing environments</i>	<i>Possible intervention points –community with whom to work</i>		
	Ejidos Cooperatives	Community Concessions	Local Labor Contractors
Wild <i>Chamaedorea</i> Populations In Natural Forests	X	X	X
Cultivated <i>Chamaedorea</i> Populations In Natural Forests	X	X	X
Cultivated <i>Chamaedorea</i> Populations – planted shade	X		

How to guarantee sustainable harvest and social justice (cost, efficiency, simplicity)

This effort's emphasis on *Chamaedorea* is based on the premise that the commercial value of the species creates an incentive for harvesters to maintain forest cover since the palm requires forest cover for its success. The preservation of the standing forest is thus directly dependent on the commercial value of the palm. Nonetheless, increasing the market for this species has its own set of potential problems. The challenge then is to seek a means to provide greater benefits to the harvesting communities while ensuring that the harvest will be sustainable, maintaining those benefits and their protective function in the future. Traditionally there has been very little control over palm harvest other than any management gatherers have practiced when filling their orders. Many of the experienced contractors have practiced rotational harvesting to help guarantee regeneration of the resource but that is not effective if others come in and harvest the same areas they have worked.

Through efforts to certify sustainable forest management for timber production, guidelines have been developed and accepted for timber management. More recently there has been interest in certifying Non-timber Forest Products (NTFPs) and there are well recognized programs for certifying products like coffee and cocoa under fair trade, social justice, organic, shade grown criteria. Thus there are programs which have been developed and are in development to certify a range of products. Up until now there has been no certification of palm production although Smartwood is in the process of developing a certification program primarily in forests that have already been certified for timber production such as the community concessions in Guatemala.

In this case where we are dealing with sustainable harvest and social justice issues, several criteria have to be met. The priority is to seek certification that assures the sustainability of the palm species, the protection of its natural growing environment, and a greater financial contribution to the livelihood of the people who depend on it as a source of income. To meet these prerequisites, emphasis should be given to only some natural environments and social arrangements not all. **Who** to work with and **what** types of growing environments to work in have already been discussed. Here we will deal with **how** to develop guidelines for sustainable harvest, management as well as how to achieve greater benefits for the communities gathering the palms.

Research issues –information needed

Currently little is known about what constitutes a sustainable level of harvest for this palm species. If the promotion of this palm to specific markets proves successful, increased interest in its harvest is sure to follow. The impact of this response will have to be analyzed. More information about the potential impacts of increased harvesting on the sustainability of the palm is needed. Likewise, we need information about the potential impacts of increased harvesting activity on the ecology of the forest in which it grows. Traditional gatherers often practice sustainable harvest and can be an important source of information on how to sustainably harvest palm which could be a starting point for any additional research.

Harvest level

The first level of action to guarantee sustainable harvest is the forest. Although considerable endemic knowledge about the biology of the palm exists and there has been research carried out on sustainable levels of harvest, this information needs to be consolidated and made available to

harvesters of the palm. Collaboration among gatherers, scientists from research organizations, government agencies and other governmental and non-governmental groups to exchange expertise is a needed first step. Nonetheless, there is likely sufficient information available to begin a program of sustainable harvest which could be fine-tuned as additional information became available.

The other issue at the harvest level is a fair wage for those harvesting the palm. Here is where community based organizations such as the ejidos in Mexico, the Community Concessions in Guatemala, and Cooperatives in both countries can play an important role replacing the contractors who presently fill orders by hiring members of local communities to gather the palm. The community organization would have to be set up to act as a facilitator providing employment and a greater share of the income from harvest to their members.

Efforts currently underway in Guatemala may provide a model for the certification of sustainably harvested palm. CONAP is in the process of developing guidelines for communities with concessions to prepare management plans for their palms which would establish a sustainable level of harvest and management guidelines for attaining sustainability as well as a monitoring system to ensure that the management plans and guidelines were followed and that the existing populations of palm were sustainably maintained. One of the major concerns in any program to promote sustainable management would be cost. If the cost of guidelines and plans is too high it could eliminate the profits currently provided by the palm to the communities or lower profitability to the point that communities would lose interest in harvesting palm removing the protective function they now provide.

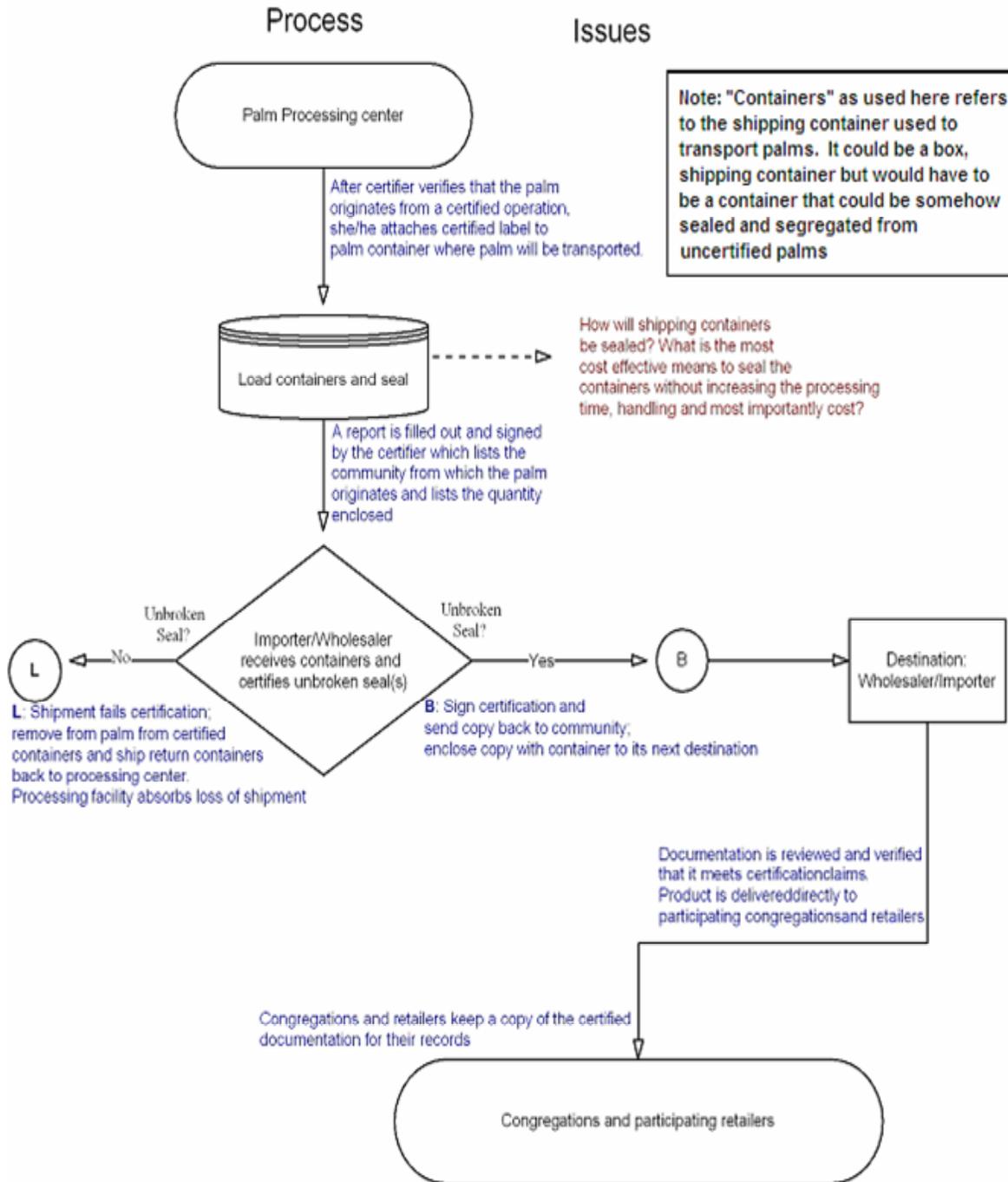
Processing

How can the existing processing methods be adopted to handle shipments of certified palm? Current processing centers take in palm from various sources in the communities they represent. What different arrangements must be made that are not cost prohibitive but that assure legitimacy of certified palm shipments without disrupting the efficiency of the process. At present palms are taken to local processing centers where they are sorted, packaged and prepared for shipping a national level facility that then forwards them to an importer in North America or Europe. The challenge is to ensure that only certified palms are processed and forwarded on their ultimate destination without having palms from other, uncertified sources enter the mix.

A potential advantage of the process being proposed by CONAP in Guatemala would be the ability to have the processing centers in communities that were only gathering certified palm. That would eliminate one step in the process where mixing with uncertified palm could occur. This could conceivably be done in a similar fashion with Mexican ejidos and cooperatives as well.

Sending separate shipments of certified and uncertified palms could be cost prohibitive but some way to distinguish and segregate certified and uncertified palms will be needed. This could be done through sealed packaging or containers which would clearly label the two types of palm. This is a point where persons who have worked on certification programs and the processors and importers of palms could be of assistance.

Figure 1 – Potential “Chain of Custody” Procedure



Once palms are processed and packaged, they are transported to export centers and then imported into the country of destination. In some cases a second sorting/selection is undertaken when they arrive at the importers and before they are shipped to wholesalers and retailers. At this point they are packaged in boxes of the wholesaler/importer in which they are sent to their final destination. At this point the certified palms need to be put into boxes/containers clearly marked as certified and in some way sealed to guarantee they are not mixed with uncertified palms.

Palms are usually packaged in bundles with 12 palms per bundle and a certain number of bundles per box. When they are shipped from wholesalers the wholesaler often needs to break up the boxes depending on the size of the order received. Some kind of identification system for the individual bundles may be required to ensure the certified palm reaches its' final destination. This could probably be accomplished through the use of a special fastener to tie the bundles or a dye applied to the stems. Here again, groups with experience with certification could be helpful in defining how to handle "chain of custody" issues.

Import to importers/wholesalers

There are approximately only 6 major importers/wholesalers operating out of 3 states –California, Florida, and Texas. These importers/wholesalers have a distribution system in place that works well. What are the incentives available that will motivate importers and wholesalers to sign on to this program? As already mentioned, separate labeling and packaging is one option but the potential increased costs (if any) are unknown. Another option is to help importers/wholesalers with the promotion of a separate product line of "Environmentally Friendly and Socially Just Palm". The benefit to these distributors is twofold: an improved image in the market place and the future knowledge or capacity to handle certified products.

Linking producers to congregations and importer/wholesalers

What are the options and the benefits of greater or more direct links between producer communities and congregations beyond the purchase of sustainable palm for congregational activities? Congregations could play an important role in the success of this effort by facilitating the promotion of certified palm and its distribution in the U.S. and Canada. The access to a potentially large number of consumers makes congregations important players. Congregations could promote the names of retailers and wholesalers who handle certified palm to its members and the florists with whom they conduct business.

Beyond the immediate effort to promote the use of certified palm for Palm Sunday and Easter activities, there are opportunities to promote the use of the certified palms by members of congregations. Beyond Easter related activities, a major use of palms is for weddings and funerals, both activities usually taking place in churches. Congregations could inform members of the availability of certified palms for church related activities and the member could then request the certified palm from their local retailer advising them, if necessary, of wholesalers who provide the palm. A third level of involvement would be to suggest that congregation members request certified palms in floral arrangements they purchase for other occasions. In this case the function of the congregation would be education of their members of the availability of certified palm and the environmental and social benefits it provides and as a source of information on where and how to obtain certified palm.

Another way to involve members of congregations in the certified palm efforts would be through some kind of visit or interchange between members of the congregations and the producers of certified palm. This would provide a much more direct link and a means to inform others about the program through presentations to their home congregations and discussion with other members of the congregation after their visit. A similar visit could be organized with individuals working with efforts that cut across denominations and who are involved in environmental stewardship and social justice issues so they could have a better idea of how the process would work and be able to present it to their colleagues and congregations.

Regulations and licenses

The use of *Chamaedorea* palm and other wild species for commercial use is regulated by national and international guidelines. The Mexican norm (NOM-006-RECNAT 1997) has established criteria to govern all handling processes, from harvest to transport. This norm is supplemented by norm NOM-059-ECOL-1994, which identifies threatened species and the procedures to protect those species. This classification criterion is used for purposes of establishing harmonized guidelines and import tariffs. Mexican regulation of the *Chamaedorea* palm requires that gatherers of the palm be licensed before permits for its collection are issued. As already stated, the entire handling chain is regulated, thus providing an established framework from which to build a customized certification process.

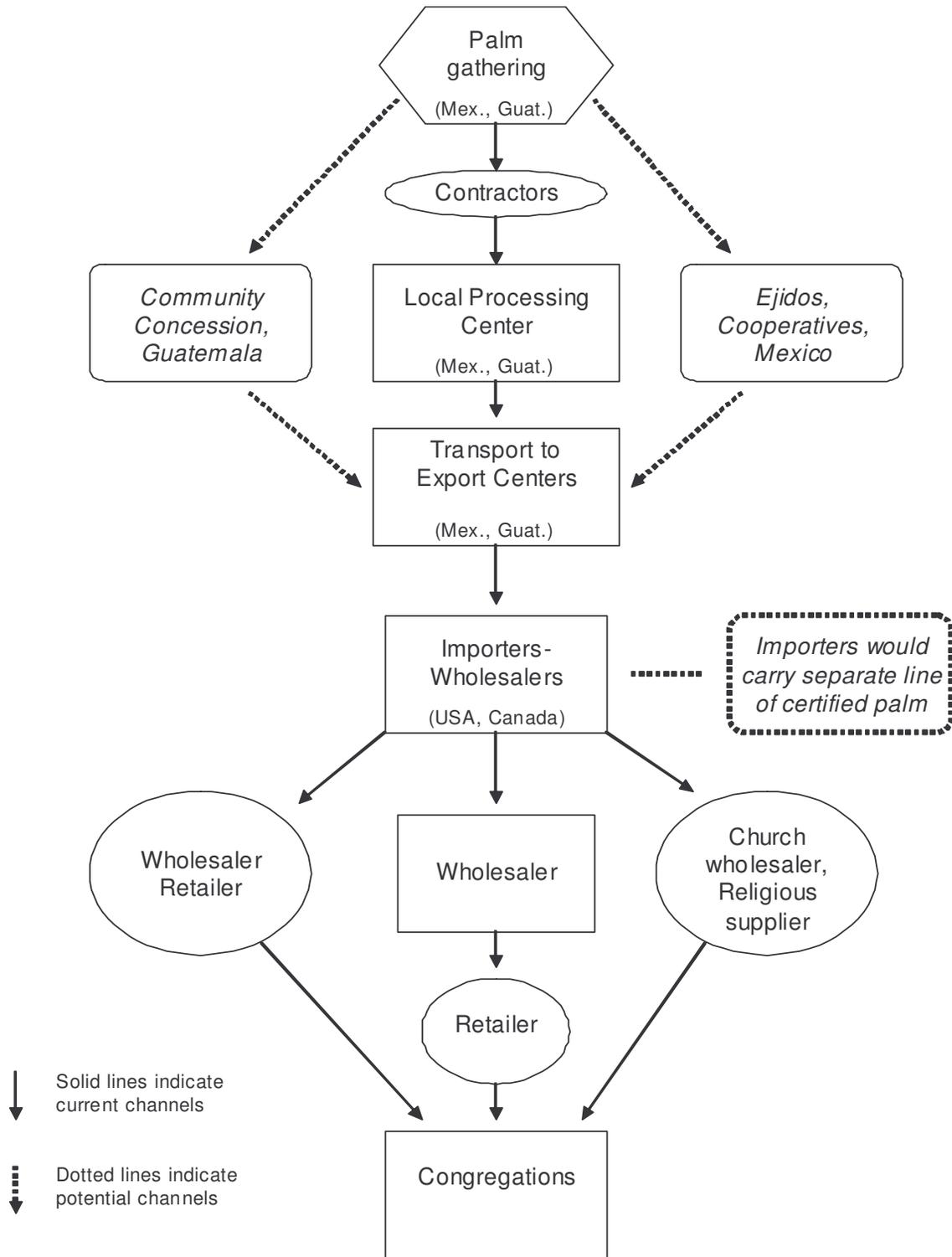
Current permit holders are a clear priority. It is fundamental that any pilot program includes only gatherers with current harvesting permits. Assurances about the protection of sensitive populations could be monitored through collaborative monitoring efforts already in the books, particularly because 38 out of 47 (80%) species of palm in Mexico are under some degree of stress. The stress ranges from 33 species currently threatened, 4 endangered, and 1 as rare (CEC 2002).

In Guatemala, traditionally licenses have been granted to contractors who pay a tax on the amount of palm gathered but with little or no control over how the palm is gathered and its impact on the palm populations and the forest in which they grow. As already mentioned, recently CONAP has been working on a licensing program which would establish guidelines for sustainable palm collection require a management plan and institute a monitoring program to ensure that the natural populations are maintained. Both the Mexican and Guatemalan programs could provide a good framework for this proposal.

Lastly, how can local labor contractors who are not licensed be brought into the existing regulatory structure? This may be an important issue. This type of program could eliminate an important source of income for the contractors who are presently working with the palms. They are also a source of information on sustainable palm production, many of them with years of experience in the trade and an excellent knowledge of areas for gathering palm. Lastly they could also be a source of conflict. Efforts to bypass the contractors in Guatemala have led to retaliation. To the extent that those contractors can be included in the process as trainers or possibly as employees of ejidos, concessions or cooperatives, the process may be much smoother.

Figure 2 below present a proposal for how the palms might move from the forest to the consumer and the links in that chain.

Figure 2 - Commercialization of Chamaedorea Palms - Proposal



Market

As has already been presented, there is a large market for palms for Easter related activities as well as an interest on the part of Christian congregations to participate in a certified palm program. Nonetheless, there are several issues that need to be worked out in relation to the market for sustainably produced palms with a fair price being paid to collectors. The palms used for Easter Week activities are not all *Chamaedorea* palms but there may be opportunities to increase the percentage of *Chamaedorea* palms used. A fair price needs to be determined for the palms. In the floral industry quality makes a great deal of difference in price and acceptability. And finally palms, a perishable product unlike coffee and other certified products require an efficient market chain to ensure they get from the forest to the ultimate consumer in a timely manner.

Substitute palms

Chamaedorea palms are not the only palms used for Easter week. A practice common in many congregations is to weave crosses from the palm fronds or purchase palms already woven into crosses. Apparently, only some species of palm are apt for weaving crosses and it may be more difficult to do that with *Chamaedorea*. This presents an obstacle to the substitution of *Chamaedorea* for the other palms used. In some cases it is probable that congregations may switch to the *Chamaedorea* palms because of the social and environmental benefits they provide but, in others, the tradition of making crosses from the palm fronds may be a problem. One opportunity to overcome this may be working on a way to also weave the *Chamaedorea* palms into crosses but it is an issue that will have to be addressed.

Price

The success of any certification scheme cannot remove the current economic incentive that suppliers receive from their mark up. The most efficient method of getting this palm to the floral and religious markets in the U.S. and Canada is to use the current distribution infrastructure. The additional income from the higher price the congregations are willing to pay would be paid to the gatherers by the importer/wholesaler. This assumes that the importer/wholesaler does not incur additional costs as a consequence of special handling of the certified palm. This is an issue that would have to be worked out with the importers who would be required to make changes in their product line to incorporate the sustainable palm. Resolving it would require an estimate of any added costs incurred by the change. But, the existence of socially and environmentally certified product in the importers product line would also provide good public relations for the importer and prepare them as leaders of any future efforts to bring certified products into the floral industry as is already happening in Europe.

Price will, to a large extent, limit the certification options available. The fact that the supply of palm to North America is controlled by so few suppliers provides opportunities to identify points along the commercial chain where intervention will be most effective. According to the CEC, harvesters currently receive 7% of the final price (Table 5). Caution should be exercised when evaluating these price data because the cost of transport from the gatherer to its final destination is not provided. The 7% therefore should only be viewed as a guide.

Table 5 Average prices paid to commercial agents in the domestic market

Agent	Price* (P\$/gross)
Producer/Gatherer	12.00
Local collector	14.00
Regional collector	16.00
Mexican wholesaler	30.00
Mexican retailer or U.S. wholesalers	180.00

* Average price per gross in pesos. Source: *In search of sustainable palm market in North America* (2002)

Quality

The fundamental issue for green marketing is assuring that the quality of the palm meets two criteria: improved quality and consistent quality. The present system offers room for improvement. Training of gatherers is contemplated and quality control at the gathering and sorting stages would be important elements of the program.

Marketing chain and efficiency

Under the current system of gathering, processing, transporting and marketing of palms, the chain of custody is not overly complicated and the process is handled efficiently to get the product to the market in a timely manner. The most efficient way to guarantee an efficient and timely delivery of palms is to work within the existing system. Using the proposed structure with community organizations doing the gathering and processing should streamline that system although care would have to be taken to ensure the smooth transition from the existing system to the community system.

Marketing

To make this effort a success will require a coordinated marketing program to congregations first in a pilot area and then broadening the project to a national scale in the US and Canada. This will entail getting appropriate information to religious organizations and congregations and educating those congregations about the benefits provided by the certified palm.

Publicity/Education

The potential for success is largely dependent on an informed market. Lack of awareness reduces the potential for a broader market. Congregations need to be informed of the issues involved in the certification effort and how this fits into their environmental justice programs. A strategy will be needed to work through different channels to get information out to congregations. Some potential options include:

- An informative pamphlet designed for congregation leaders (with the assistance of the relevant denomination leadership) could educate them about how to best disseminate the information to the parishioners and how to guide them to make economic choices that support their churches' social justice efforts.
- A supplement to this would be a brochure highlighting a certified operation which could be made part of/or included in the churches' general correspondence with their parishioners.

- Presentations at Denominational conferences and special conferences dealing with social and environmental justice issues.
- Working through the network of existing denominational and interdenominational organizations/groups that deal specifically with social and environmental issues. These groups usually have internet sites and newsletters that could be used to get the information out. Several organizations have already indicated their willingness to include information about the program in their periodic newsletters.
- Exchanges between congregations and communities. . The unique use of this palm by religious organizations provides the opportunity to get the congregations directly involved in assuring that the fair trade aspect of the operation meets fair-trade criteria. Good will tours of certified areas by church groups could be a mechanism through which churches can further promote the marketing of certified palms. Goodwill tours will give congregations firsthand evidence of the social and environmental benefits the certification program provides.

Key to all of these efforts will be the incorporation of religious organizations involved with social and environmental justice issues in designing a strategy to inform and educate congregations about the palm program.

Standards

The certified palm can be marketed to comply with organic, environmental stewardship (sustainability), social justice, and product quality standards. Caution should be exercised in the promotion of all these assurances for fear of weakening the overall objective. Too many assurances tend to water down the credibility of any one of them. Nonetheless, the benefits provided by the program are many and should be used to inform congregations and other potential consumers.

Administering the process

To make the certification program work will require. Who will the agents responsible for administering the entire process be? Up until now, the CEC has been promoting and funding the preparation of background information to initiate this process. In the future, another administrative organization will be required to administer the process. Figure 3 below presents a potential framework for orienting the discussion.

References:

CEC, 2002. In search of a sustainable palm market in North America. CEC:Toronto, Canada.

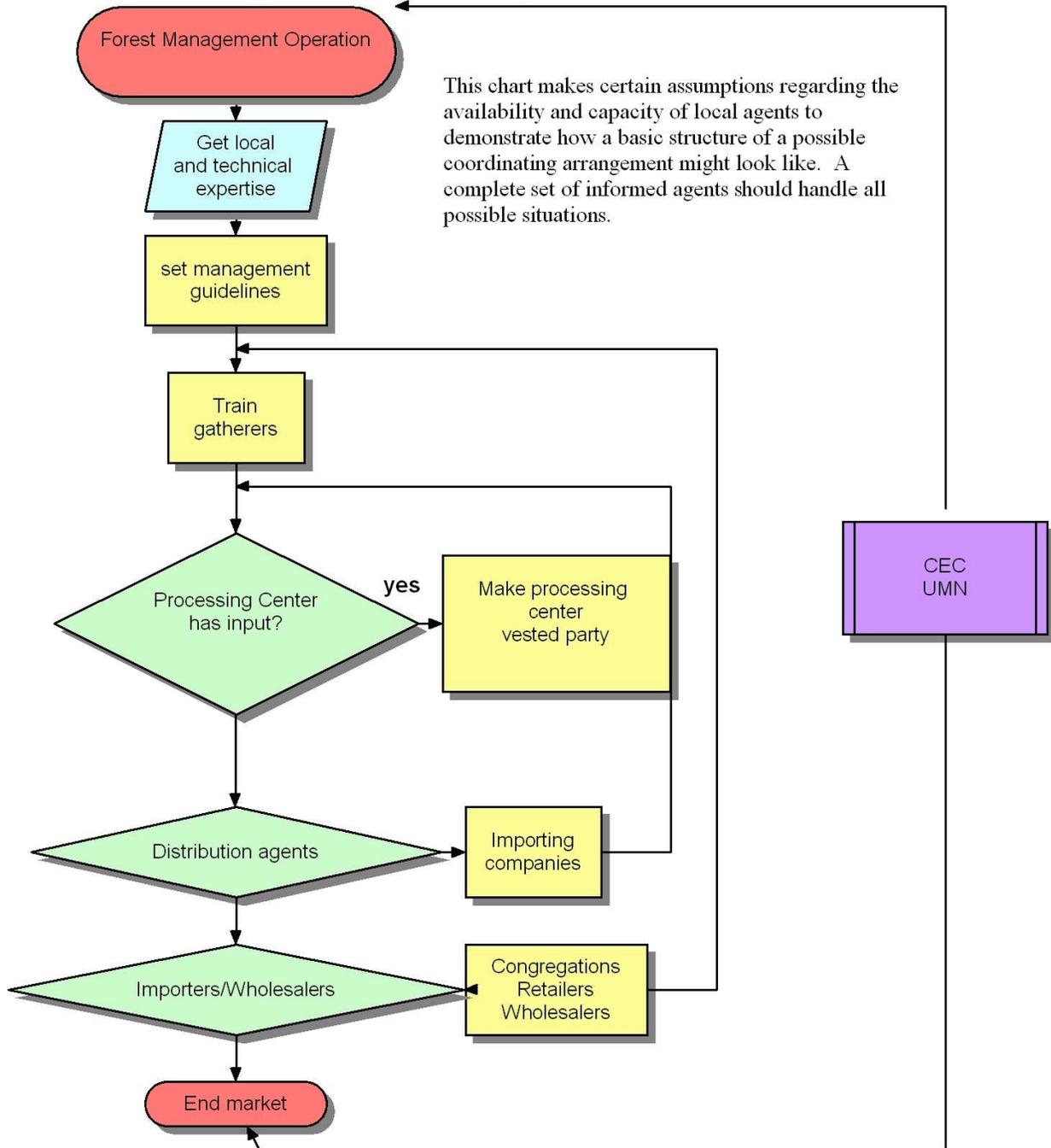
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Shanley, Patricia et al. (ed), 2002, *Tapping The Green Market –certification & management of non-timber forest products*, People and Plants Conservation Series, WWF – UNESCO – Royal Botanic Gardens, Kew

Figure 3 – Administering a sustainable palm program

Responsibility Flowchart

Administering Coordinating the Process



Annex 1

SURVEY ABOUT THE USE OF PALM FRONDS AT YOUR CHURCH

Please circle the answer that most correctly describes your situation, or fill in the information requested. All individual responses will be kept confidential.

This survey deals with palms of the Genus *Chamaedorea* with trade names in the floral industry such as emerald, jade, teepee, mayan, commodore, medium, wide and jumbo.

- Q1 Farmers in Mexico and Guatemala gather the *Chamaedorea* palm, the palm most often used in churches, and for many of them the income from palm fronds constitutes a substantial portion of their limited income. Do you think palm gatherers should receive a fair payment for their work?
1. Yes
 2. No
- Q2 If the *Chamaedorea* palm is certified, this can have social and economic impacts on conditions for gatherers and also on the environment (forests) from which they are gathered. Which do you think is more important? (*circle one*)
1. Improving social/economic conditions of gatherers
 2. Improving environmental stewardship of forests
 3. Both are equally important
- Q3 Does your congregation purchase palms for Palm Sunday and/or other church celebrations or activities?
1. Yes
 2. No (IF NO, SKIP TO Q14)
- Q4 Do you know the name of the palm your congregation purchases?
1. Yes → *What is (are) the name(s)?* _____
 2. No
- Q5 Where does your congregation currently buy palms? (*circle one*)
1. Local florist
 2. Local wholesaler
 3. Directly from importer
 4. Directly from producer
 5. Other → *please list* _____
- Q6 Does your congregation have special arrangements to purchase palms from certain florists?
1. Yes → *please explain*
 2. No

- Q7 How many palm fronds does your congregation use on Palm Sunday?
(circle one)
1. Less than 25
 2. 26-50
 3. 51-75
 4. 76-100
 5. 101-125
 6. More than 125 → Please indicate approximate number _____
- Q8 About how many palm fronds does your congregation purchase each year for occasions other than Palm Sunday?

- Q9 What is the average price you currently pay per palm frond or bunch?
(Note: a palm frond is what you might provide to parishioners on Palm Sunday. A bunch is usually made up of 25 palm fronds.)
- Price per frond/branch \$ _____
- Price per bunch (25 fronds) \$ _____
- Q10 If the price of certified palms were to be set 10¢ higher than the price you pay today, would your congregation purchase the certified palms?
1. Yes
 2. No
- Q11 If the price of certified palms were to be set 10¢ higher than the price you pay today, would your congregation purchase the same quantity of certified palms as the quantity currently purchased?
1. Yes
 2. No
- Q12 What is the most that your congregation would be willing to pay for each certified, fair-traded Chamaedorea palm frond? (circle one)
- 10¢ 20¢ 30¢ 40¢ 50¢ 60¢ 70¢ 80¢ 90¢ 100¢ 110¢
- Q13 Palm fronds are used in the preparation of floral displays for weddings and funerals. Does your congregation use palm fronds or displays that include palm fronds for any occasion other than Palm Sunday? (circle all that apply)
- a. Yes, we use them for weddings
 - b. Yes, we use them for funerals
 - c. Yes, we use them for other occasions
 - d. No, we use them only on Palm Sunday
 - e. Don't know

Q14 We would like to get an estimate of the number of weddings and funerals in your church each year to estimate the use of the palms. Please answer the following questions as best you can.

About how many weddings are performed in your church each year? _____

About how many funerals are held in your church each year? _____

Q15 Small-scale coffee farmers often struggle to make a living. Through fair trade programs farmers receive a fairer income (higher price) and get access to services they otherwise would not. Do you engage in any program like this?

1. Yes → *please list* _____
2. No

Q16 Are you familiar with any other fair trade project?

1. Yes
2. No

Q17 Would you be willing to inform families that are purchasing floral arrangements for weddings, funerals and other church events about the certified, fair-traded palm?

1. Yes
2. No

Q18 Does your congregation have any projects or programs dealing with environmental protection/stewardship?

1. Yes → *please explain*
2. No

Q19 What is the size of your congregation?

of Individuals _____

of Families _____

Q20 What church denomination do you belong to? (*circle one*)

1. Baptist
2. Catholic
3. Episcopal
4. Lutheran
5. Methodist
6. Presbyterian
7. Church of Christ
8. Assemblies of God
9. Other _____

Q21 What is your position in the congregation? (*circle one*)

1. Pastor/ Minister/ Reverend
2. Secretary
3. Other _____

Thank you very much for your assistance with this survey.
Please return your completed survey form in the enclosed, self-addressed envelope to:

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University of Minnesota
2331 University Avenue SE, Suite 141
Minneapolis, MN 55414-3067