

Evaluation of Regular Xate Jade (*Chamaedorea oblongata*) Frond Quality delivered to the Uaxactún Xate “Bodega” Sorting House

By

Rony García, Roan Balas McNab, Gabriela Ponce, José Moreira,
Julio Zetina, Eleazar González, Kender Tut, Eliberto Muñoz and Herny Tut

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INTRODUCTION

The harvest and trade of the xate palm leaves is an integral part of the economy and subsistence of the local inhabitants of the Maya Biosphere Reserve in Guatemala. Approximately 4,000 xateros earn an average daily salary of US\$ 5.15 for this activity (Soza 1999). In some localities, more than 60% of the men, locally known as “xateros” obtain their incomes through xate harvesting. Moreover, the xate industry uses middlemen known as “contratistas” as contractors, transporters, and hires numerous harvesters and selectors, creating economic growth that benefits the entire community. The value of xate and other non-timber products that depend of the forest creates a conservation initiative to protect the productive forests in an area where classic protectionism has proven to be unsuitable.

To maintain this conservation incentive however, the harvest has to be sustainable. Recent evaluations of the sustainability of NTFPs harvested in Petén have been discouraging (Reining et al. 1992, Radachowsky and Ramos 2004). There are few efforts to force the xateros to follow the regulations imposed by the National Council of Protected Areas (CONAP), such as harvest only two leaves per plant annually, and harvest only those of marketable quality. Most of the xateros are paid by volume and not by quality in the actual market, and as much as 70% of the harvested fronds are discarded in the majority of the sorting houses. In many areas, the xate plant does not produce flowers or fruits probably due to the energy spent in new frond growth. The way in which xate is being harvested can have important implications for the viability of wild populations, especially if the low quality leaves are harvested but never exported. The damaged leaves, spoiled leaves or uncolored leaves can have low or null commercial value, but they still work adequately to facilitate the wild plant’s physiological processes. For these reasons, decreasing the % of waste of the xate fronds should be one of the priorities of the xate management.

This document evaluates the quality of the main species of xate (i.e. “jade” or *Chamaedorea oblongata*) delivered to the only xate sorting house in Uaxactún, that buys xate palm leaves under a different market system. In this bodega xateros are paid only for exportable fronds, thus lowering the incentive of the harvest of non-economic value fronds and promoting their persistence on the wild plants.

Methods

The sampling was carried out in the sorting house of Uaxactún that is managed by the Organización Manejo y Conservación -OMYC-. Data were obtained on 17 different occasions from 2005 until March 2008. Each day, with the assistance of sorting house personnel, the quantity of marketable regular xate jade fronds (i.e. 18-22” long) delivered by each xatero was registered, and also the quantity of xate leaves discarded during the selection process (unmarketable leaves for several reasons such as: inappropriate size, insect damage, stains caused by pathogens, among others).

Results and Discussion

We obtained data from 640 harvest samples of regular size xate jade sold by the xateros to the Uaxactún sorting house on 17 different sample periods (Table 1).

Table 1. Sample origin and % of marketable or “quality” fronds during each sampling date.

Fecha	Cantidad de xateros	% Calidad para el día de muestreo
Ago-05	24	92.76%
Sep-05	29	92.15%
Nov-05	16	86.21%
Abr-06	7	82.13%
Nov-06	6	94.57%
Ene-07	10	92.14%
Abr-07	18	72.31%
May-07	9	94.80%
Jun-07	15	88.99%
Jul-07	8	98.16%
Ago-07	14	97.24%
Sep-07	23	93.71%
Oct-07	16	93.70%
Nov-07	12	91.68%
Dic-07	17	82.32%
Feb-08	5	95.98%
Mar-08	8	80.23%

The highest % of quality was observed in July 2007 (98.16%) and the lowest value was observed in April (72.31%) of the same year. The xate quality for April 2007 was the lowest reported until now, but it recovered again in May (94.80%) and then showed a slightly decrease in the next month (88.99%), recovering in July with the highest quality reported (98.16%). During 2006 and 2007 the lowest % quality occurred during the dry season in April, probably during this time there are natural phenological variations associated with climate, in addition to increased market demand.

With the exception of April 2007 data, it seems that pattern of xate quality delivered to Uaxactún sorting house during the two-year period is consistently above 80%, and in addition the amount of variation appears to be decreasing (Fig. 1).

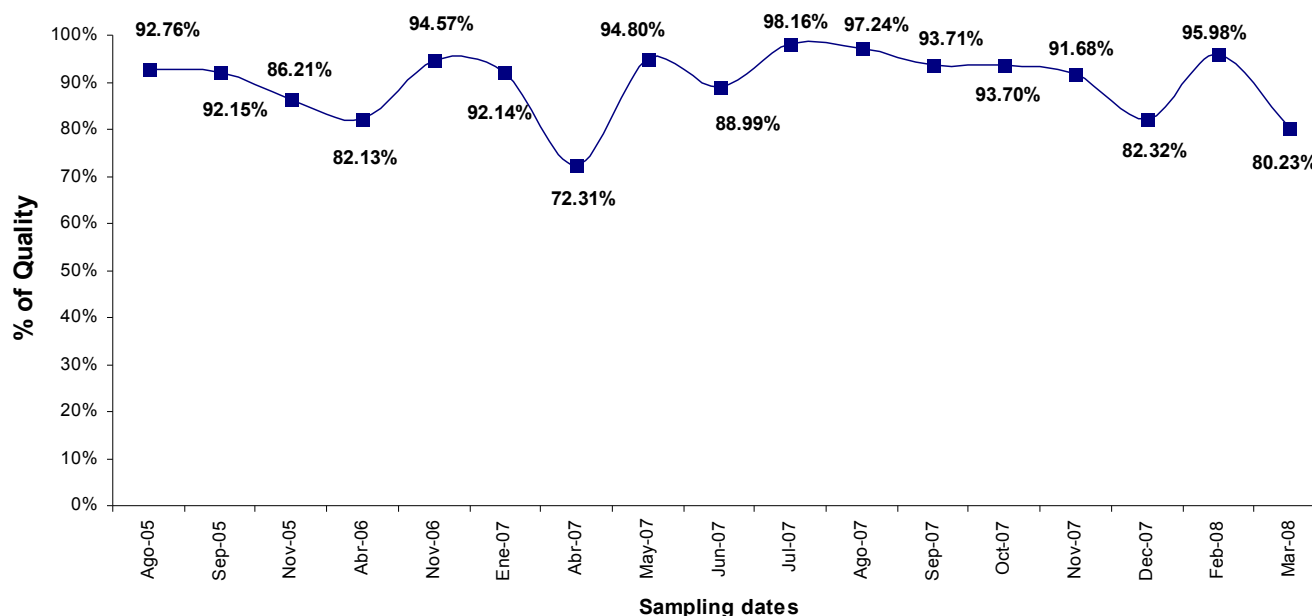


Figure 1. Tendency of the % of “marketable” quality fronds of regular xate jade delivered to Uaxactún sorting house in 17 different dates. The graph depicts the percentage (%) of quality (marketable fronds/total delivered fronds).

It is important to note that since April 2007 we have collected data 4 times per month, thereby permitting us to obtain more accurate estimate of the standard deviation of the amount of quality. In general, the data in the tendency of the quality of xate reveals ups and downs that may correspond to phenological variations associated with climate, and market competition, or individual harvester characteristics. Nevertheless, the trend over time reveals that once engaged in the per-frond payment system, harvesters tend to quickly modify their harvesting behavior, selecting a much higher percentage of quality fronds. The trend in xate quality observed during the last months at OMYC xate bodega represents a huge step forward in terms of increasing the potential sustainability of the harvest. In addition, it is important to note that the quality of xate that is delivered to Uaxactún sorting house is slowly becoming more equal, and of a higher quality over time reaching 98.16% in July.

We started the monitoring of xate in other sorting houses (communitarian sorting houses of AFISAP, Carmelita, MAEX and Arcoiris) with the support of CONAP. The methodology consists on visiting the sorting house once a week to estimate the percentage of xate frond waste. The sampling was carried out by two WCS technicians and a CONAP technician. Although great effort was made to obtain data from these sorting houses, and

logistics were refined during time, few data are available to analyze and determine patterns in xate quality in those sorting houses. Here we present a brief analysis for AFISAP sorting house that is the one with the greatest data available. We collected data from 4 different sampling dates between October 2007 and March 2008 (Table 2).

Table 2. Sample origin and % of marketable or “quality” fronds during each sampling date in AFISAP sorting house.

Fecha	Cantidad de xateros	% Calidad para el día de muestreo
Oct-07	3	80.80%
Ene-08	9	80.60%
Feb-08	6	71.60%
Mar-08	8	81.10%

The highest % of quality was registered in March 2008 (81.10%), but it seems that there are not great differences among dates; most of the samples collected were above 80% of quality. The lowest % of quality was observed in February 2008 (71.60%), but it again recovered in the next month (Fig. 2). These data are useful as base line for AFISAP sorting house, but they are not enough to make concrete conclusions about xate quality patterns through time. More data is still needed and a systematic collection of data is required.

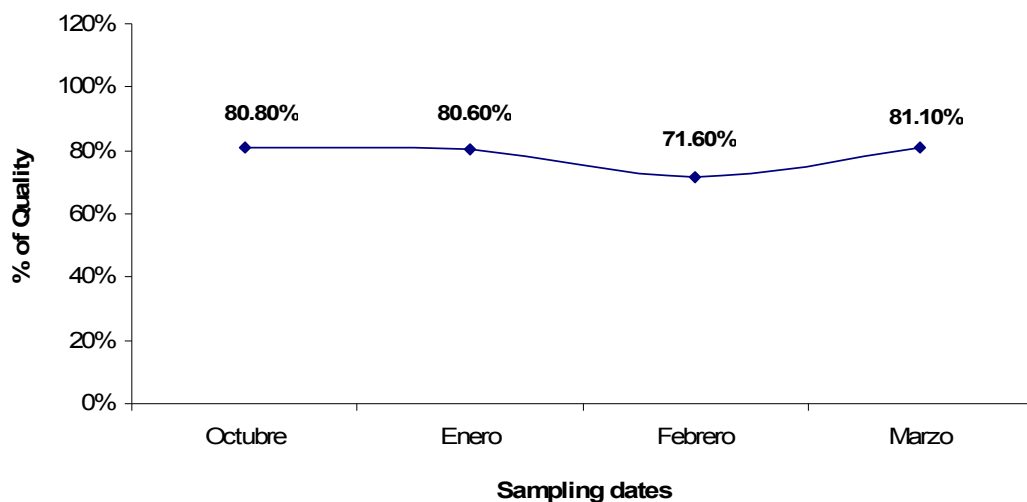


Figure 2. Tendency of the % of “marketable” quality fronds of regular xate jade delivered to AFISAP sorting house in 4 different dates. The graph depicts the percentage (%) of quality (marketable fronds/total delivered fronds).

The current data from xate waste monitoring available only for Uaxactún sorting house; despite of being very useful for monitoring the xate management system recently implemented, it is not representative to be a biological integrity indicator for the entire MBR. The indicator criterion for xate needs to be improved collecting data from wild xate

populations across MBR using permanent plots. Permanent plots will provide information of the wild xate population condition and dynamics through time in different areas of the MBR. Permanent plot methodology has to be developed and implemented soon. Sporadic and more spaced in time data collection in selected sorting houses (samples) should be conducted to have an accurate measure of the xate waste pattern in some management units.

References

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