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Research Article

Trade In Flower Shops In The Municipality Of Cárdenas, Tabasco, Mexico

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ABSTRACT

The trade in cut flowers and foliage in the state of Tabasco depends on the foreign market; Contrary to this way of operating, it is known that some species are suitable for cultivation in Tabasco, such as the Brazilian Palo species, a species adapted to tropical areas that could be a commercial alternative, with the possibility of market diversification. Therefore, it remains to be asked: What would be the supply and demand for cut flowers and foliage? The objective of the research was to characterize the commercialization of flowers and foliage, and in turn, that derived from the cut foliage of the Palo de Brasil species in flower shops in the Centro neighborhood of the municipality of Cárdenas, Tabasco, Mexico. Surveys were applied, processed and based on a descriptive analysis the results were established, considering the general aspects that characterize the supply and demand of the cut flower and foliage trade. A total of five florists were surveyed, it follows that 60% carry out fiscal operations, their trade is focused on obtaining cut flowers and foliage, manufacturing floral arrangements for weddings or fifteen years; May 10 being the date of greatest economic relevance. Sunflower, Roses and Lilies respectively are the most requested flowers; and its pair, Japanese Clove, Brazilwood and Tullia, foliage. The plant material acquired by the florists comes from the Jamaica Market in Mexico, Central de Abasto de México, Monterrey, Puebla and Chiapas.

Keywords: place of origin, cut flowers and foliage, supply and demand.

I. INTRODUCTION

The market for cut flowers and foliage for the florist industry, during 2019 and 2020 experienced a decrease worldwide estimated at -5.16% according to information estimated by the Observatory of Economic Complexity [OEC] (2023). The report carried out by the Agrifood and Fisheries Information Service [SIAP] (2023) indicated that around 4173 million flowers were produced in Mexico, a figure that led to a recovery of the market, since an increase of 8.4% was estimated compared to 2022, in such a way that monetary calculations were equivalent to about 6,177 million pesos according to the information released by SIAP (2023). At the national level, the most important state in the production of cut flowers for the florist industry is the state of Mexico, its production reached 75.9% during 2022 as shown by SIAP data (2023); with respect to the state of Tabasco, it is observed that it does not appear in the statistics at the national level, however, some figures have been documented, especially of productive activity, which is very incipient, as Saldaña et al. had already been arguing. (2013). To date, there is disaggregated information on the cut flower market, the information needs to be complemented to specify how commerce operates in the state. Thus, the flower trade in the state of Tabasco lacks statistical information that allows a comparative analysis; therefore, it remains to be questioned: What would be the supply and demand of cut flowers and foliage? Therefore, the objective of the research was to characterize the commercialization of flowers and foliage, and in turn, that derived from the cut foliage of the brazilwood species in florists in the Centro neighborhood of the municipality of Cárdenas, Tabasco, Mexico. The above may be useful in decision-making. In this sense, it will be necessary to specify, as Saavedra-García

et al. (2020) argue, regarding the need to establish mechanisms that generate changes in the marketing processes of small companies, since, by knowing their environment, it seeks to promote competitive development in micro and small enterprises. The reproductions of these practices will end up influencing the permanence within the market of cut flowers and foliage in small and medium-sized companies in operation.

II. METHODOLOGY

The research was carried out in the municipal seat of the municipality of Cárdenas, Tabasco, Mexico, specifically in the Centro neighborhood, which is recognized for its commercial activity. Figure 1 shows the geographical location of the Centro neighborhood.

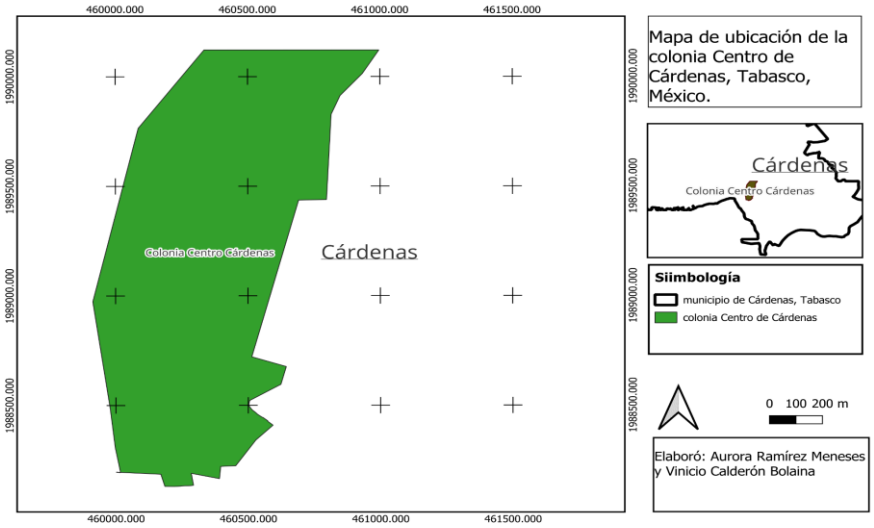

Figure 1. Geographical location of the Centro neighborhood of the municipality of Cárdenas, Tabasco, Mexico

2.1. Gathering information

For the registration of the information, previous knowledge about the different establishments that participate in the process of commercialization of cut flowers and foliage in the Centro neighborhood was taken as a basis; In this sense, by default, the area that includes the limits of the colony and those that participate in commercial activity was selected.

To know the supply and demand of cut flowers and foliage, a semi-structured survey of open and closed questions was applied, taking into consideration the plant material acquired and offered in the florists that were in operation during the year 2022, responding to the following variables: 1) Characterization of the trade of flowers and foliage in florists: activities carried out, seasonality, quantity and types of cut flowers and/or foliage and 2) Characterization of the trade in cut foliage of the brazilwood species: supply and demand, price behavior, losses, management, shelf life and damage associated with pests and diseases, cut foliage that replaces it, suppliers and origins that market it. The inclusion criteria for the analysis of the information were those florists that participated in the research (responding to the survey), so that, out of a total of eight establishments visited, only five agreed to answer the survey. The above procedure was suggested by Rodríguez-Orozco (2017).

2.2. Systematization of information and analysis

Data collection of florists was carried out from IDs. In order to organize and systematize the variables, the Google Drive application: Forms and Sheets was used. For the analysis of the information, it was carried out in a descriptive way, for which the information obtained, the base of output information (spreadsheet), was opened for treatment in the statistical software infostat (Di Rienzo et al., 2020), thus obtaining frequency tables and graphs.

3. RESULTS

3.1. Characterization of the trade of flowers and foliage in flower shops in the Centro neighborhood of the municipality of Cárdenas, Tabasco

Based on the analysis of the information, it can be deduced that from a total of five commercial establishments that agreed to provide information dedicated to floristry in the Centro neighborhood of the municipality of Cárdenas Tab (CcTab), the following information was obtained: on the trade of cut flowers and foliage as part

of the economic environment, Figure 2, that about 40% of the establishments visited are not registered with the Tax Administration Service [SAT], so they remain as informal businesses, only 60% carry out operations with the SAT.

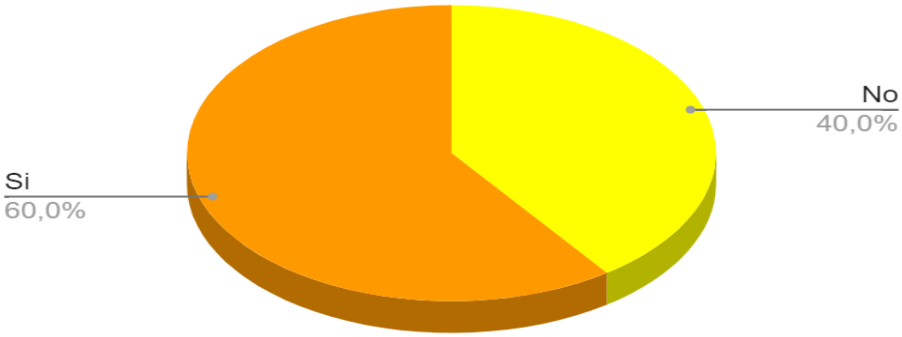

Figure 2. Florists incorporated into the collection system before the Ministry of Finance and Public Credit [SAT]

3.1.1. On the activities carried out in the florists

With regard to the activities carried out in the florists surveyed by the CcTab, it can be seen that 60% of the establishments are only dedicated to obtaining cut flowers and foliage, manufacture of floral arrangements, manufacture of flower arrangements for wedding events, fifteen years (FFC-FAF-FAFPB), while 40% are dedicated to obtaining cut flowers and foliage, manufacture of flower arrangements, manufacture of flower arrangements for wedding events, fifteenth birthdays and other activities (FFC-FAF-FAFPB-OA), mentioned that they also sell stuffed animals, bags and boxes, balloons, wooden boxes, crystals and fruit arrangements (Figure 3). A large part of the activities in the flower shops are covered, either with their own supplies (Ramírez Hernández & Avitia-Rodríguez, 2017); as well as, of their creativity and skill in improvising, making and designing their floral arrangements.

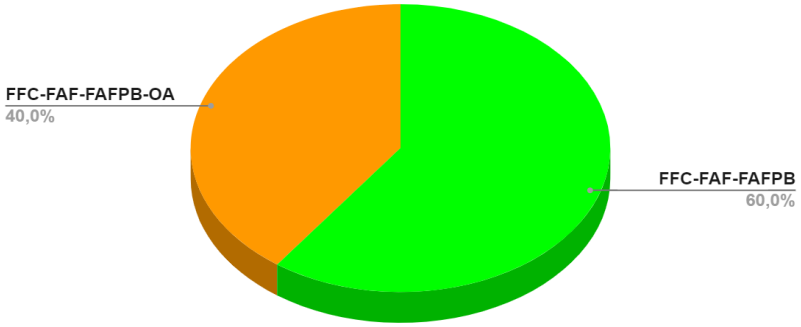

Figure 3. Activities carried out in the surveyed flower shops in the Centro neighborhood of the municipality of Cárdenas. Tabasco

Note: Obtaining cut flowers and foliage, making flower arrangements, making flower arrangements for wedding events, quinceañeras and others (FFC-FAF-FAFPB). Obtaining cut flowers and foliage, making flower arrangements, making flower arrangements for wedding events, fifteen years and others, other activity (FFC-FAF-FAFPB-OA)

3.1.2. On the seasonality, quantity and types of cut flowers and/or foliage

It can be seen that the dates of greatest demand for cut flowers and foliage in the surveyed florists, indicated that May 10 is the date of greatest representativeness (37.5%), followed by the dates December 12 and February 14, which are constituted as dates of second level of importance (25%); while on November 2 of no less relevance, the results placed it in third place in attendance in florists with 12.5% (Figure 4).

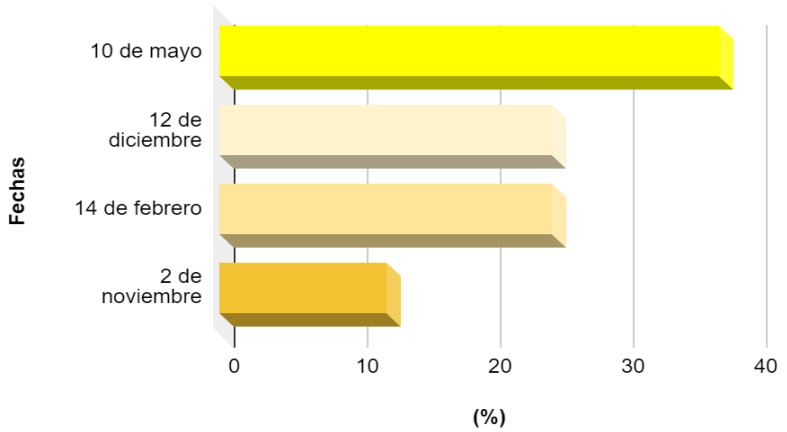

Figure 4. Dates of greatest representativeness, in the shops of flowers and cut foliage, determined in the surveys applied in the Centro neighborhood of the municipality of Cárdenas, Tabasco, Mexico

As for the origin of the flowers and cut foliage marketed in the establishments dedicated to floristry, making floral arrangements, the plant material used comes mainly from the Jamaica Market in Mexico, Central de Abasto de México, Monterrey, Puebla and the state of Chiapas (Figure 5). The origin of cut flowers and foliage is determined by prices, seasonality and diversity in the demand for flowers, as argued by Orozco-Hernández (2007), in such a way that the supply of flowers from the Central de Abastos in Mexico is coupled to the foreign market, with the United States and Canada being responsible for its variation and impact on prices. as well as in the diversity of the production of cut flowers and foliage.

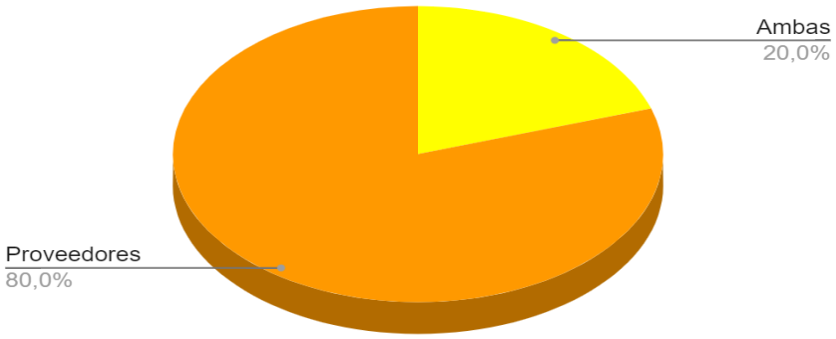

Figure 5. Origin of flowers and cut foliage that are marketed in the surveyed florists in the Centro neighborhood of the municipality of Cárdenas, Tabasco, Mexico

Figure 6 shows the way in which flowers were acquired by the surveyed flower shops. The sunflower is one of the most acquired, in most cases in the form of a bunch and by the dozen; the carnation is purchased in bunch, roll and dozen; on the other hand, the rose is obtained mostly in the form of a bunch and in a package, like the lilis; as well as quail, which is acquired in bundles and rolls; the gladiola, in bunch, thick and dozen. In this way, the aforementioned species are the ones with the highest demand in the florists surveyed by the CcTab.

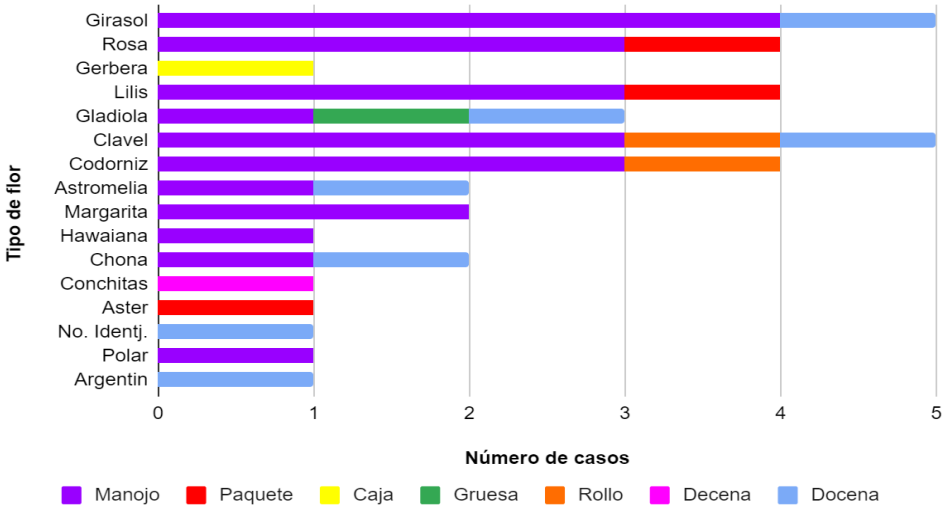

Figure 6. Method of acquisition of cut flowers that are marketed in the surveyed florists in the Centro neighborhood of the municipality of Cárdenas, Tabasco, Mexico

Figure 7 shows the percentage of the cut foliage species in greatest demand in the florists surveyed by the CcTab, it was observed that the "maizera" or brazilwood as it is also known and the Japanese Clove are marketed in 22%, the dollar foliage is the second in level of commercial importance with 13% of acquisition; meanwhile, Tulia and Pinito ranked third in commercial species (9%).

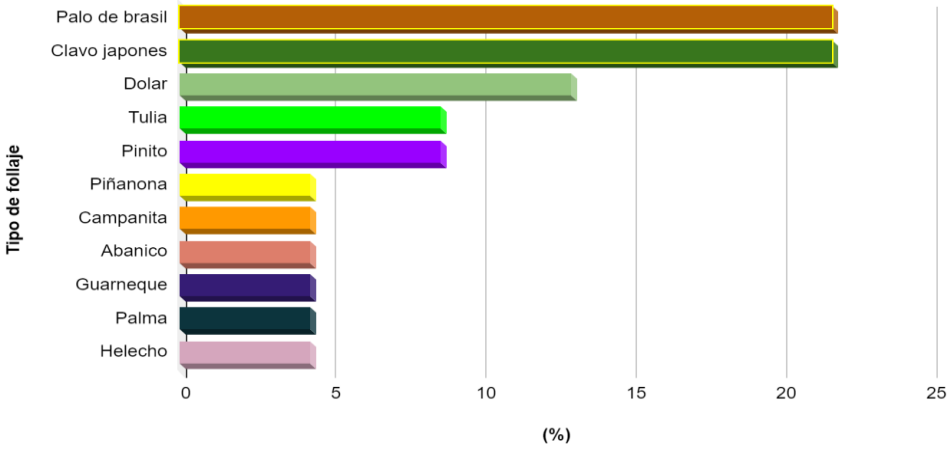

Figure 7. Types of cut foliage that are used in the construction of floral arrangements in the florists surveyed by the CcTab

3.2. Supply and demand for brazilwood (*Dracaena fragans* L. Ker-Gawl) foliage in the Centro neighborhood of the municipality of Cárdenas, Tabasco

With regard specifically to some marketing processes of brazilwood cut foliage, the surveys carried out focused on the behavior of prices, losses, shelf life; as well as problems associated with post-harvest management: conservation, pests and diseases; followed by: other substitute foliage, and, finally; suppliers and provenances that assist in obtaining brazilwood cut foliage, regularly.

3.2.1. Brazil Wood Cut Foliage Price Behavior and Losses

Regarding the behavior in prices, the owners of the flower shops only mentioned that they maintain a stable behavior, without increases in prices, a query made to one of the points of sale located in Mexico, Federal District, reveals that the sale price of corn foliage, also known as brazilwood, indicated that the price of ten leaves is 5 pesos, plus shipping cost (Foliage and flowers, 2023). In detail, the respondents refrained from giving an answer to this question, so it was not possible to delve into this aspect. On the other hand, in relation to the losses of brazilwood cut foliage, this ranged from 66% to 1%, the variation could be related to the expertise of some of the businesses surveyed. Figure 8 shows the results of losses obtained by florists, which shows that in some of the florists there are losses of great significance of up to 66.4%, while there is a difference in other florists of 19.9% (La fé) and 11.0% (floraly), data that show that the losses are very varied. With minimal loss or at the same time, which can be of great importance. The quantity to be offered and the demand for it at

certain times of the year would have to be analyzed in more detail, as well as the post-harvest management that is carried out in a particular way.

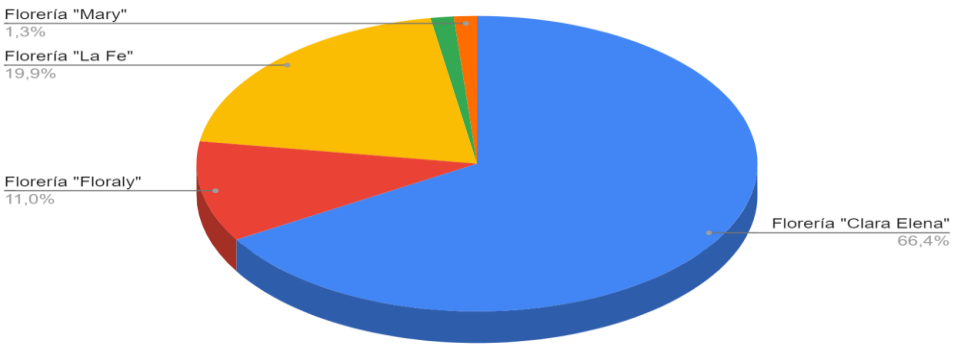

Figure 8. Losses of brazilwood-cut foliage in the surveyed florists of the Centro neighborhood of the municipality of Cárdenas Tabasco, Mexico

3.2.2. Management and shelf life of brazilwood-cut foliage

Once the cut foliage has been received, brazilwood, its duration and maintenance in the conditions and its use for floral arrangements and other decorative uses implemented in the flower shops, is a function of the expertise of the owners in the flower shops. Figure 9a shows the percentages of how they reduce their actions, which range from those who submerge their leaves in a jar of water (40%), or in chlorinated water (40%) to those who change the water every third day (20%) as post-harvest conservation measures; which results in a variation in the shelf life of the foliage, which ranges from 7 to 15 days, and on average lasts 9.4 days (Figure 9 b), the useful life of the brazilwood foliage (corn) can be appreciated, it could be said that according to the experience obtained from the respondents in the flower shops, that without these treatments the shelf life of the cut foliage would be shorter. Studies by González et al. (2011, p. 141) have suggested that "Pre-harvest cytokinin application and moistening foliage prior to packing improved its condition" improved foliage condition in the species *Dracaena marginata*.

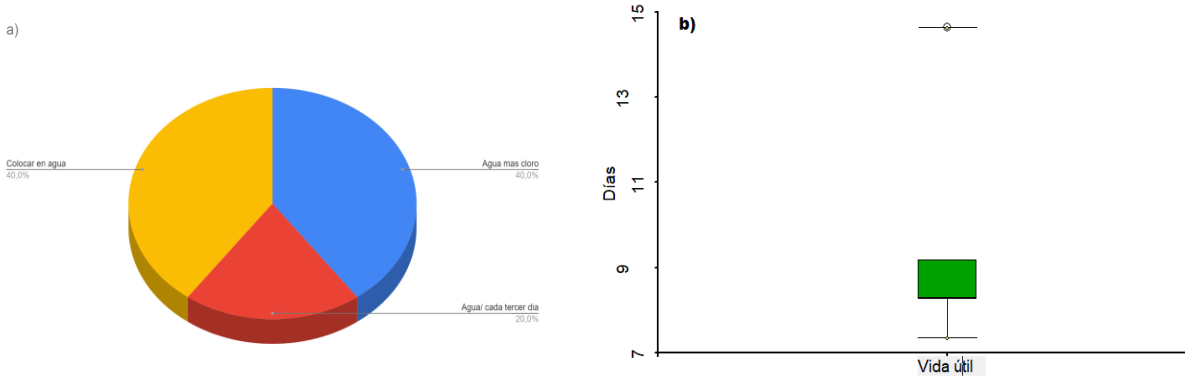

Figure 9a) Postharvest treatment and, 9b) shelf life of brazilwood-cut foliage, in the surveyed florists in the Centro neighborhood of the municipality of Cárdenas, Tabasco, Mexico

3.2.3. Damage associated with pests and diseases

Only 20% of the respondents stated that once the foliage was received, they reported having noticed the presence of larvae that were causing damage to the base of the petiole of the brazilwood leaf.

3.2.4. Cut foliage used in florists and used substituted brazilwood foliage

Of the cut foliage used in the surveyed florists with the highest demand, a total of nine types of foliage were listed, of which the Japanese clove stood out as the most used, while the brazilwood foliage was considered second, followed by tulia foliage as the third. One of the most widely used. Figure 10a shows the estimated percentage according to the type of foliage used in the flower shops, it can be seen that the Japanese clove has an occupancy of 28%, brazilwood 22%, the tulia 14%, as for the dollar, bell, fan, pinito and fornio have an occupation in the supply of foliage used with 8%. On the other hand, of the foliage used to replace brazilwood foliage in the surveyed flower shops, it is common that of the first three foliages positioned they usually opt for

Japanese clove foliage with 30%, followed by palm with 20% compared to pinito, tulia, yubelina, bello uillermo and ivy with 10%. Figure 10b shows the estimated percentages by type of foliage, which are used in the substitution of brazilwood foliage.

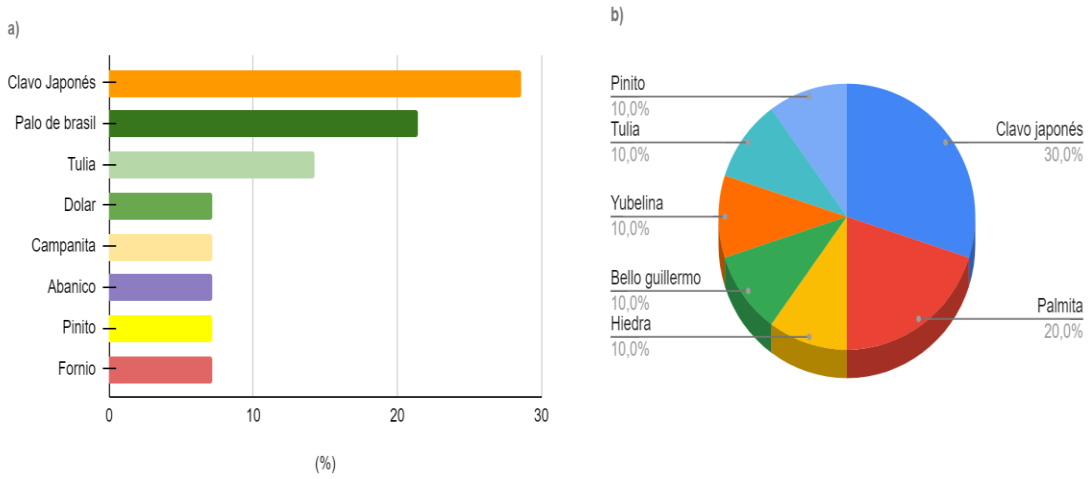

Figure 10a) Cut foliage offered in florists and 10b) Foliage used to replace brazilwood-cut foliage. In the surveyed flower shops in the Centro neighborhood of the municipality of Cárdenas Tabasco, Mexico

3.2.5. Suppliers and provenances of brazilwood-cut foliage

From the florists surveyed, it was found that 80% of the foliage comes from Mexico City and the rest comes from the states of Chiapas, Puebla and Monterrey. Only 20% of those surveyed indicated that they have a cultivation system from which they take advantage of the brazilwood foliage. It is mentioned that the suppliers of cut flowers and foliage come from the Jamaica Market in Mexico City, being the most sought-after place of origin by the florists of residents of the Centro neighborhood of the municipality of Cárdenas, Tabasco, as well as, the respondents point out that some of the species of flowers and foliage come from the state of Chiapas. without specifying the places of origin for security reasons according to the respondents.

4. CONCLUSIONS

Based on the results obtained, it can be deduced that 60% of the establishments dedicated to the commercialization of cut flowers and foliage located in the Centro neighborhood of the Municipality of Cárdenas, Tabascos, Mexico, carry out fiscal operations, the businesses are dedicated to obtaining cut flowers and foliage, manufacture of floral arrangements, manufacture of flower arrangements for wedding events, fifteen years, the date declared as of greatest economic relevance was May 10; Likewise, the respondents indicated that the flowers of greatest interest to the consumer are sunflower, roses and lilies respectively; from the above, the results obtained coincide with Tejeda-Sartorius et al. (2015) who report that the flowers with the highest sales are roses and Lilies, however, for this particular study, sunflower was in greater demand. As for the most requested foliage, they were Japanese cloves, brazilwood and Tulia. The expertise of the owners of the florists to prolong the useful life of the flowers and foliage, has led them to experiment with different solutions such as chlorinated water, water (submerging the plant material or making water replacements), whose practices have led them to prolong the life of the flowers and foliage between 7 to 15 days. In relation to the origin of the flowers and cut foliage, they mentioned the Jamaica Market in Mexico, Central de Abasto de México, Monterrey, Puebla and the state of Chiapas as the places most requested by florists.

Thanks
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