

Logistics management of small cut-flower businesses: a brief overview of retail trade on the coast of Paraná – Brazil

ABSTRACT

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Given the perishability of cut flowers, logistics plays an important role in keeping the quality of the product in terms of the time the crop travels from harvest to delivery to the final consumer. The trade of this type of flower is common on the coast of Paraná, but there are no studies that show the importance of logistics in the competitiveness of the regional production chain. In order to identify the main obstacles in the logistics process on the coast of Paraná, we carried out descriptive exploratory research with ten florists managers. The most commercialized cut flowers were roses, orchids, heliconias, lilies, sunflowers, tulips, and baby's breath, being the rose the most commercialized one. All of the respondents in our research reported that the main decision factor in the type of logistics adopted was the delivery system at the store door. This logistic system, however, did not always allow buying quality flowers that could meet customer demands. Apparently, the collective purchases registered by groups of 3 to 5 retailers may guarantee faster purchases, lower cost and higher quality of flower, as well as higher competitiveness to the regional retail market of cut flowers.

PALAVRAS-CHAVE: ornamental plants, floriculture, landscaping, transportation cost, flower trade.

1 INTRODUCTION

The world market of flowers has shown satisfactory growth since the 1990s, with a 10% annual growth rate, and with the Netherlands, the United States, Japan, and Italy as its main market (REGO et al., 2009; VIEIRA et al., 2019). Latin America shows a similar growth rate to the other areas of the planet, being Colombia the largest producer, followed by Ecuador, but Brazil also shows big potential for floricultural products production and trade (ANDRADE, 2016).

The largest flower production and trade center in Brazil is located in Holambra region, in the State of São Paulo (MURARO et al., 2019). That region corresponds to 40% of the national market volume, and it also exports to the Netherlands, Portugal, Canada, United Arab Emirates, among other countries (SIMONETTI, 2006).

Since the strong growth of floriculture in Brazil in the 1980s, other regions of the country have also started to produce cut flowers for commercial purposes, but the production is always located in large consumer centers (SIMONETTI, 2006; Muraro et al., 2019). Due to the distance from those regions to other cities with large consuming capability, flower transportation logistics should be in line with the demands of each species - cut flower in particular since they have less durability.

According to Bonato (2015), the term "cut flower" designates flowers cut off the plant that produces it, and it can be commercialized with its stems and leaves, or its inflorescences and flowers. In Brazil, the chrysanthemum, calla lily, carnation, rose, sunflower, lily, orchid, tulips, and anthurium are among the most demanded flowers (AKI; PEROSA, 2002).

The longevity of cut flowers is associated with physiological factors of the plant, the environment the plant is, and chemical factors used in treatment and harvesting (TAGLIOCOZZO et al., 2005). Each flower species has its durability and requirements and it demands a specific treatment to be long-lasting. The way it is handled, especially in the pre-harvest phase, is a very important factor, together with the environment where the climate factor and temperature contribute to its quality and durability, and according to Anefalo and Caixeta Filho (2005), the faster a cut flower reaches the commercial point, the better its quality and the higher its durability.

Distribution logistics is fundamental to the process because it aims at the planning of actions for product delivery, such as route, transportation, the vehicle of the transportation and management of deliveries and storage of products – that is, factors that influence transportation and price setting. Therefore, logistics makes it possible to offer quality services, efficient cost reduction, and profit maximization (FILHO, 2011).

The choice of transportation depends on the product and it influences the cost, delivery speed, and reliability to deliver the product with the desired quality. The transportation should be reliable as to maintain product quality and integrity, and it should deliver the product fast at a low cost and meeting its specifications (CAMPOS, 2013). Thus, logistics becomes a differential factor to solidify the cut flower trade sector and it deserves careful attention with regard to the planning, execution, and control of the physical flow of products and of information, from cultivation and harvesting, from the supplier to the final product, including delivery

and after-sales. Logistics can contribute to improve profitability and reduce process costs, such as price, quality and time. Therefore, logistics becomes essential in the pursuit of efficiency, agility and competitiveness in the production and marketing of flowers and ornamental plants (LUNKES et al., 2005).

According to Anefalo and Caixeta Filho (2005), it is relevant to understand the role of logistics processes in the distribution of flowers, since greater competitive advantages could emerge and consequently, greater insertion in consumer markets.

Therefore, regarding the cut flower market, logistic systems are becoming increasingly prominent and taking a central position in strategic planning, working efficiently in order to improve time and cost reduction process and increasing quality, offering business advantage and generating greater customer satisfaction. This set of needs promotes logistics studies in cut flowers distribution as an essential condition for the success of this type of product. (LUNKES et al., 2005; BONATO, 2015).

In Paraná, the flower cutting market shows little effectiveness when it comes to meeting internal demand, making it necessary to promote the importation of flowers from other producing regions.

Given the lack of information about how efficient the logistics of cut flowers in Paraná is, this study aimed at identifying what are the influencing factors in cut flower logistics in the coastal region of Paraná, which was chosen for being a traditional place of production and trade of cut flowers. The study also aimed at identifying the main cut flower species commercialized in the region, how the logistics chain work for distribution and transporting of the flowers destined to the coastal region of Paraná, as well as promoting an analysis of the factors influencing the choice of logistic system of cut flowers adopted by retailers in the Paraná coast.

2 METHODOLOGY

The research conducted for this study is considered exploratory-descriptive qualitative, as proposed by Gil (2002), which can issue answers and be satisfactorily employed in the development of business management research, and represents a way to ensure accurate results.

The field research was conducted from May 2018 to May 2019, and similar to that proposed by Vergara (2000), it included a visit and application of a semi-structured questionnaire addressed to business owners retailers who sold cut flowers in the Paraná Coast.

The coast of Paraná was chosen because according to Anacleto et al. (2017) this region has a high potential for flower production and marketing associated with a growing increase in per capita income, similar to other developing countries. In addition to that, this region is configured as a regional center for flower production and it has a population of over 250,000 people, and an average per capita income of 765,85, receiving two million summer tourists with potential to consumption per year. Paranaguá currently has the seventh largest financial collection in the state. Classified as a medium-sized city, it has per capita features similar to those of another 160 municipalities of Brazilians.

The selection factors for the present study were florists or similar establishments selling cut flowers. There were 20 establishments identified in the cities of Antonina, Guaratuba, Guaraqueçaba, Matinhos, Morretes, Paranaguá, and Pontal do Paraná. However, due to accessibility and receptivity, ten florist managers agreed to participate in the survey.

The interview script covered pre-defined, open-ended questions about cut flowers regarding the logistic processes, and once the data collection stage was completed, according to Vergara (2000) and Lakatos and Marconi (2003), the data triangulation technique was adopted for the interpretative and descriptive analysis of the content obtained during the interviews.

3 RESULT AND DISCUSSION

The coast of Paraná has singularities, as regards the consumption of flowers. Evaluating flowers in general context, respondents ($n = 45\%$) report that there is preference for potted flowers for consumers' own use, and that cut flowers are most sought to be given as gifts, and that the production of these type of flower in the very region is incipient and does not meet demand, requiring the importation of flowers from other regions of Brazil and abroad.

Regarding the management of the projects, on the coast of Paraná, only retail establishments were identified in the distribution of cut flowers, carried out by florists and garden center shops.

Regarding the management in its entirety and carried out by the owners themselves ($n = 9$), in all cases, there was a family business system, which began with the family's deep interest in flowers, and as the dedication as a hobby evolved, it became a business. Only later, as it became the main source of family income, the search for improvement and qualification in the management of the venture began, with specializations in the areas of administration, landscaping, flower handling, and florist courses.

Flowers acquisition for resale occur primarily on demand and according to customers prior orders, and according to respondents ($n = 100\%$), a few species are sought, being roses, orchids, heliconias, lilies, sunflowers, tulip, and baby's breath, being the rose the most commercialized rose, as they can be sold by units, in bouquets or in arrangements with other products existing in the flower shops.

Despite market growth, managers reported that the search for cut flowers still occurs on specific dates, such as Valentine's Day, Women's Day, Mother's Day, All Souls' Day, Christmas and other commemorative dates.

All respondents reported that the origin of the flowers is Holambra in São Paulo, on average 600 kilometers from the coast of Paraná. Considering that Holambra receives flowers from all over Brazil for redistribution, this distance can be much longer and it requires logistics to be time-efficient so that the cut flowers reach the commercial points with satisfactory quality and health. In this respect, specifically to the coast of Paraná, several logistics strategies were observed.

The main strategy associated with logistics found among respondents ($n = 45\%$) is the search for partnerships for the execution of the logistics system. In those partnerships, managers and suppliers, even if informally, form a business bond and have commercial loyalty which allows them to meet their needs and

demands for supplying cut flowers, with the wholesaler delivering the flowers at the "shop door".

In this process, the flow of logistics starts from the farmer, moves to the commercial center called Veiling de Holambra which is a reference in the flower market, where the flowers are purchased by large wholesalers from Curitiba, Paraná and Joinville in Santa Catarina, and later, the prompt delivery sale is made in the Paraná coast region. These wholesalers, who are also called "resellers", promote deliveries on the coast of Paraná twice a week and seek to meet requests for various species of cut flowers.

The flower sector needs a lot of interaction between the agents, so the improvement of each step should be the central focus of the various members involved in this chain so that common weaknesses can be identified and it is possible to understand how to solve or mitigate problems (ANEFALOS; CAIXETA FILHO, 2005). This type of commercial partnership causes logistics problems to be "outsourced", and despite the larger acquisition cost, which is then passed on to the consumer, it is classified as satisfactory.

Also according to Anefalo and Caixeta Filho (2005), failures occurring during the logistics process, that is, from the displacement of the place of purchase to the final consumer, may reflect losses for each of the agents in this chain, and may be caused by unpredictable factors, such as delayed transport due to traffic jams, overcrowding or refusal of inappropriate packaging. Eliminating these risks allows this type of logistics outsourcing to be well accepted by retailers on the coast of Paraná.

Especially because of the influencing factors, such as convenience, when deliveries occur in the establishment itself, and it is not necessary to hire vehicles, or going to Holambra, the quality of the flowers is evaluated when they arrive, and retailers have can choose the desired species. In this system, despite the higher cost for the consumer, entrepreneurs get the best value for money, meet the demand by offering their customers the varieties and choice of the desired cut flower, at a zero-risk rate with the logistics. It is noteworthy that in this model when the demand is higher the retailers promote special orders to wholesalers and are served satisfactory in their perception.

The main negative factor in this outsourced logistics model according to a significant part of the interviewees ($n = 45\%$), is that because the coast of Paraná is the most distant delivery destination and it is considered the end of the delivery line, in multiple times the best cut flowers have already been sold in other cities, leaving the retailer of the coast of Paraná With a product that does not always have the quality desired by the final consumer.

Therefore, despite having many advantages most of the time to the retailer, adopting this type of logistics causes the retailer to have lower-quality flowers, when compared to other regions, and also a higher price, which repels a significant portion of customers who may seek to replace the flowers with other products.

The second type of strategy adopted by traders on the coast of Paraná, and reported by Anacleto and Negrelle (2019), is not very frequent and only it can be observed in seasonal periods of great demand for flowers, such as Mother's Day, Valentine's Day, and others. In this case, small groups of retailers from different cities come together looking for a lower purchase price and higher product quality,

organize in buying groups that reduced the total costs of products, on an average of 12%. Collective buying, in this case, has the basic function of increasing the power of bargain, dilute transportation costs and, consequently, increase net profit margins. Also according to Anacleto and Negrelle (2019), the groups were composed of three to five retailers, and purchasing and payment control took place in relay among participants. It is noteworthy that the reduction in the purchase price was not always passed on the final price to consumers, and it was used as a margin expansion of retail net profit.

This type of logistic strategy for cut flowers, despite presenting lower acquisition cost and generate greater profitability, also reveals as major setbacks that the conservation, durability, and quality of cut flowers are difficult to maintain in flower shops, and if sales do not happen as planned, according to the interviewees ($n = 45\%$), they can generate waste of different species, because there is not a suitable structure for the cut flowers to remain fresh and keep quality for the market. Nevertheless, a significant portion of respondents reported that retailers could be more united and promote more collective purchases, which would reduce transport apportionment costs, increasing the quality of flowers and consequently adding other products to their arrangements, making their actions more solid for their business.

The demand for cut flowers changes over time, and the scenario in which it operates, as well as socioeconomic factors, such as income and culture, and the seasonal periods of highest consumption.

Logistics should act as a facilitating condition in the improvement of these types of businesses, filling the gaps between consumer regions and producing regions, as it is the case of the coast of Paraná. In this context, the logistic systems adopted by the regional retail market, while meeting the demands of entrepreneurs, apparently fail to confer competitiveness capable of being a decisive factor for stability and growth of cut flower consumption. Lack of control in the logistics process may result in losses for the wholesalers that are caused by the lack of care in transport, non-conservation of the cold chain and, logistical delays. However, apparently these issues are not concerns of florist retailers on Paraná coast. Even though the products have higher costs, there is service that generates required quantities, periodic delivery schedules, although with varying quality standards, which can cause customer dissatisfaction and, thereby, increase the influence of substitute products.

Logistics of cut flowers in the Paraná coast adopts highway transportation as the only distribution mean, which is efficient, but in many cases requires outsourcing due to and the wholesaler's service and to the distance from the wholesale centers. That results in the quality of the flowers offered to be below what is required by consumers. Thus, the chain between the producer on the farm and the consumer in the urban area may undergo changes in the process, reducing the value of the final product in favor of convenience.

The collective purchasing system has apparently been consolidated as an efficient model that promotes the reduction of fixed costs, without changing the quality in standards of action, ensuring a product that meets customer expectations. Another positive factor to this logistics model is the fact that the retailers themselves are present at Veiling de Holambra, which puts them in direct contact with new market trends, new products and consequently can measure

ways of innovation, diversification and permanent incorporation of new products, in addition to ensuring the fast availability of replacement products requested by customers. This model, however, while reducing retail costs, should also consider benefits to the final consumer, reducing the final price and increasing the competitiveness of floriculture products in the region through consumer loyalty.

4 FINAL CONSIDERATIONS

The study revealed that cut flowers are most sought as a product to be given as gifts, and that the production of this type of flower in the coast of Paraná is incipient and does not meet the demand, requiring the importation of flowers of other regions of Brazil and abroad.

The study revealed that all existing retail establishments in the region are classified as small family businesses. Acquisition of flowers for resale occurs as minimal purchases or, in special cases, on demand from prior customer orders.

The most commercialized cut flowers are roses, orchids, heliconias, lilies, sunflowers, tulip and baby's breath, being the rose most commercialized one.

All respondents reported that the origin of the acquisition of flowers is Holambra in São Paulo, which is an average of 600 kilometers from the coast of Paraná. The main deciding factor in the type of logistics adopted by the majority of respondents was the delivery system at the shop door, with the flower species choice delivered by wholesalers from Curitiba and Joinville, but this logistics system did not always enable the purchase of quality flowers that could meet the demands of customers.

Apparently the collective purchases registered between groups of 3 to 5 retailers that occur on a smaller scale in the region can ensure retailers greater agility in purchase, lower cost and higher quality of the flowers offered, and it can also promote greater competitiveness to retail of regional cut flowers.

Gestão logística de pequenas empresas de flores de corte: um breve panorama do comercio varejista no litoral do Paraná-Brasil

RESUMO

A logística, dado a perecividade das flores de corte, tem um papel importante na qualidade em função do tempo de deslocamento da safra após a colheita até a entrega ao consumidor final. O litoral do Paraná é região de tradicional no comercio desse tipo de flor, realizado pelo comercio varejista, porém não existem estudos que revelem a importância da logística na competitividade da cadeia produtiva regional. Neste contexto, visando identificar os principais entraves no processo da logística no litoral do Paraná realizou-se uma pesquisa exploratória descritiva junto a dez gestores de floriculturas. As flores de corte mais comercializadas eram as rosas, orquídeas, helicônias, lírios, girassóis, tulipa e mosquitinho, sendo a rosa mais comercializada. A totalidade dos entrevistados informaram que o principal fator decisório no tipo de logística adotada era o sistema de entrega na porta da loja. Porém esse sistema de logística nem sempre possibilitava a compra de flores com qualidade que pudesse atender as demandas dos clientes. Aparentemente as compras coletivas registradas entre grupos de 3 a 5 varejistas podem garantir aos varejistas maior agilidade de compra, menor custo e maior qualidade das flores ofertadas, assim como pode conferir maior competitividade ao varejo de flores de corte regional.

PALAVRAS-CHAVES: Plantas ornamentais, floricultura, paisagismo, custo de transporte. Comércio de flores.

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