

by Aleiandro Sá

Competitive management for export of roses from Mexico to Canada

Pérez-Ramírez, Ricardo¹; Villarroel, Luis M.¹; Vivanco-Vargas, Martin¹; Díaz-Calzada, María E.¹; Sánchez-Rayas, Francisco¹; Pérez-Ramírez, Christian¹; Solís-Lozano, Juan A.¹; Vasco-Leal, José F.^{1*}

- 1 Universidad Autónoma de Querétaro Facultad de Contaduría y Administración. Querétaro, Querétaro. México. C. P. 76010.
- * Correspondence: jose.vasco@uaq.mx

ABSTRACT

Objective: To evaluate the behavior of the international market of roses between Mexico and Canada and to propose competitive management strategies that could be implemented in the rural economic units to consolidate the presence of Mexican roses in the Canadian market.

Design/methodology/approach: The methodological process to fulfill the objectives of this study uses the deductive approach, since we start from an analysis of the rose market in Canada in order to determine the competitive management strategies. Gathering information was conducted in platforms of agrifood documental information and statistics in the national and international spheres.

Results: Mexico has excellent agro-environmental conditions, efficient international logistics, solid infrastructure, a valid trade agreement with Canada (T-MEC), and outstanding experience in agricultural production of roses. In addition, there is a significant demand in the Canadian rose market that has been dominated in recent years and until today by Colombia and Ecuador.

Limitations on study/implications: It is a study that could be used as reference for any agricultural producer, rural production society, of international trade company that wants to penetrate the rose market and its exports from Mexico to Canada.

Findings/conclusions: Finally, this study evidences the importance of taking advantage of the available commercial opportunities and to promote synergy between the public and private sectors to drive the growth of agroindustry of roses in Mexico and to contribute to economic development of the country. With an intelligent approach and strategic execution, Mexico has the potential of becoming a prominent actor in the export market of roses to Canada in the coming years.

Keywords: Agribusiness, social welfare, international trade, cut flowers, competitive management.

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F., Pérez-Ramírez, C., Solís-Lozano,

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INTRODUCTION

both in the national market and in the international. At present, the global economy and the globalization process have promoted a greater commercial integration between the countries. The main objective of this integration is to maximize the economic benefits through international trade, at the same time generating greater welfare for agroindustrial producers (Tyce, 2020). Egea et al. (2021) explain that agricultural production should be connected with science, politics and society, so that it can generate through it a bioeconomy that produces wealth, economic growth, development and employment through conservation, management and reinvestment in ecosystems.

In recent decades, vegetable products in Mexico have acquired a growing importance,

According to the studies performed by Avendaño-Ruiz *et al.* (2023) and Foreign Agricultural Service (2023), the international flower market is dominated primarily by the world's main exporter, the Netherlands, followed by Colombia and Ecuador. In the year 2020, Colombia registered a total export value of approximately US\$ 1,411 million dollars, with an annual mean growth rate of 4.7% for nearly three decades. In order of importance, Ecuador occupies a noted place in this international market. During the period between 1989 and 2020, Ecuador experienced growth of 12%, which demonstrates an outstanding mean annual rate. This growth has consolidated this country as a prominent actor in international flower trade, increasing its competitiveness in face of other international competitors.

According to Darras (2021), the global industry of cut flowers has been facing grave challenges throughout the years, but it still continues to be an important sector of agriculture. Floriculture businesses seek trends and new and innovative niches to increase sales, as well as the implementation of marketing strategies to communicate to the final consumer the practices carried out during cultivation, cutting and post-harvest, which tend towards an ecological profile, low CO_2 footprint, and environmental responsibility. There are diverse factors such as evolution of markets, selection of varieties that adapt to the meta market needs, quality of flowers, optimization of trade, and competitive management which are essential for the sustainable success in this sector (Faust & Dole, 2021).

Throughout the years, the production and commercialization of roses in Mexico has presented a series of obstacles that have prevented its growth and consolidation as a prominent agribusiness. There are several causes identified associated to this predicament, among them the lack of updating in the productive system, lack of knowledge management by those in charge of production, a deficient logistics-distribution system, low level of adoption of administration practices in agribusiness, as well as the lack of knowledge about opportunities in the international market and the basic export process, which has had the consequence of producers not to being able so far to exploit business opportunities in the international market. Therefore, this study approaches a perspective of the importance of international trade as one of the sources of economic development in our country, fundamentally due to the possibilities of market diversification, attaining better prices, addressing the growing demand, and improving the quality of life, which determine a favorable growth potential for this sector in the country.

Floriculture is one of the most profitable agricultural activities that Mexico can have, and the country has the potential to become an important exporter in this sector. Diverse competitive advantages, including the geographic location with commercial ports and terminals in two oceans, border crossings, customs offices, road infrastructure, cargo airports, in addition to proximity to the principal markets, United States and Canada, and the signing of free trade agreements that allow access to international markets (ProMéxico, 2018). Thus, the free trade agreement between the United States, Canada and Mexico (T-MEC) is defined by the internationalization policy of the economy of the commercial block, through a preferential and permanent relationship with a fundamental actor in the global economy, with the aim of gaining access to broader markets, competitiveness, elimination of commercial conditions and barriers, and technology exchange, a greater growth and economic development (Gobierno de México - SADER, 2019). These references indicate that the country has the experience, the logistic and commercial abilities to occupy an important place in the flower trade at the global level, and in addition they show that there are still many possibilities of growth given that the production level destined to the international market continues to be low.

Therefore, the analysis of competitive management shows great relevance, since it provides an integral view of the internal factors that influence the insertion and positioning of an organization both in the local and international markets (Melo-Perdomo *et al.*, 2018). In a globalized and highly dynamic scenario, the stakeholders of rose agribusinesses face complex challenges that require accurate strategies and a deep understanding of international markets.

This study has the objective of providing the necessary information to serve as a reference to agricultural producers in Mexico, which are considering entering the export market of roses to Canada. This country offers excellent business opportunities for the trade of this product. Therefore, the purpose of this study consists in evaluating the behavior of the international market of roses between Mexico and Canada, and proposing competitive management strategies that could be implemented in the rural economic units to consolidate the presence of Mexican roses in the Canadian market.

MATERIALS AND METHODS

Type of research: Descriptive research will be used.

Research method: The methodological process to fulfill the objectives of this study uses the deductive approach, since the starting point is evaluating the behavior of the rose market in Canada and, therefore, proposing competitive management strategies for the consolidation of the export market of roses from Mexico to Canada.

Search for agricultural information and the demand of the rose market in Canada: The methodology proposed by Vasco-Leal *et al.* (2022) was followed. The statistical data of roses in Mexico were obtained from sources of information, among others, from the software called *Sistema de Información Agroalimentaria de Consulta* (SIACON). To estimate the potential and value of the rose market in Canada, it was necessary to understand the situation of rose imports in this country, as well as its main trade partners. The statistical information was obtained from the customs duty fraction "060311", using the international archive of Trade Statistics for International Business Development for the International Development of Companies (https://www.trademap.org/).

SWOT analysis to diagnose the current situation of the export process of roses from Mexico to Canada

According to Ramírez (2017), "The SWOT analysis is a subjective analysis that helps to understand, present, discuss and make decisions. It can be used in any type of decision making". This analysis is generally presented in matrix form divided into four areas of analysis: Strengths, Weaknesses, Opportunities, and Threats.

RESULTS AND DISCUSSION

Agricultural production of roses in Mexico

Table 1 shows that for the year 2021, Mexico had approximately 1,746 hectares of rose crops, which are concentrated especially in the states of Estado de México (863 ha), Puebla (385 ha), Querétaro (125 ha) and Morelos (301 ha). For that same year, the national production of roses in the country reached US\$ 143,923,954, with Estado de México being the top national producer and generating 76.61% of the total economic value of domestic production, followed by the state of Puebla (US\$ 13,765,890), Querétaro (US\$ 11,367,025) and Morelos (US\$ 4,866,188). These results for the year 2021 present a stable trend compared to the year 2018 in the three main producing states of Mexico (Solís-Lozano *et al.*, 2022).

Performing a stricter analysis to understand the dynamics of each of the producing states, the result evidence that Estado de México is the one responsible for 76.61% of the economic value of the production; the main producing municipality is Villa Guerrero (US\$ 58,918,040), followed by Tenancingo (US\$ 27,747,132) and Coatepec Harinas (US\$ 13,998,626), among others. In turn, Puebla contributed 9.56% of the production value in the year 2021, which is distributed mainly in the municipalities of Chiautzingo (US\$ 5,075,089), San Salvador El Verde (US\$ 4,099,761) and Atlixco (US\$ 2,659,916), among others. In Querétaro, the rose production is concentrated specifically in the municipalities of San Juan del Río (US\$ 9,580,227) and Pedro Escobedo (US\$ 1,786,738), which represents 7.90%.

This situation means that there is at least the basic infrastructure, experience and production, so as to have feasibility of volume for a trade process of roses with some type of destiny. According to Velázquez-Torres *et al.* (2021) and De León (2018), the rose agribusiness is of great economic and social importance in the territories, and this is why competitive management strategies should be established by the private sector to obtain better results in the production, business management, economic efficiency, as well as the public sector to facilitate guidelines through public policies and institutional reinforcement that improve the quality of life of the members of the primary sector and their rural communities.

Mexican state	Planted area (ha)	Production (gruesa)*	Production value (US\$)	(%)
México	863	7,416,230	110,257,586	76.61
Puebla	385	720,011	13,765,890	9.56
Querétaro	125	573,642	11,367,025	7.90
Morelos	301	696,778	4,866,189	3.38
Jalisco	34	150,498	2,900,478	2.02
Oaxaca	21	12,824	393,548	0.27
Hidalgo	8	7,768	183,333	0.13
Guerrero	7	7,240	135,544	0.09
Tlaxcala	2	2,220	54,361	0.04
Total	1,746	9,587,211	143,923,954	100

Table 1. States that produce roses in Mexico 2021.

Source: Prepared by the authorS with data obtained from SIACON (2023). Note¹: 1 gruesa is 144 rose stems. Note²: 1 US\$ dollar = 16.74 MX\$ pesos.

Behavior of the import market of roses in Canada

In a globalized, highly dynamic scenario with much evolution, the actors from this agribusiness face complex challenges that require accurate strategies and a deep understanding of international trade. In recent years, the international market of roses has experienced a moderate growing trend without significant changes. However, as Figure 1 clearly shows, in the year 2020 there was a decrease in international rose trade due to the COVID-19 pandemic.

Next, Figure 1A presents a series of data obtained from TRADEMAP (2023) which show the behavior of imports in Canada between the years 2013 and 2022, according to the classification of the customs duty fraction 060311. It is estimated that the results from the global rose market for the year 2022 reached approximately US\$ 3,013,231,000 dollars. At the international level, for the year 2022, the main imports in Canada come from Colombia (US\$ 38.7 million) and Ecuador (US\$ 25.8 million). In second place, there are imports from Ethiopia (US\$ 1.0 million), Guatemala (US\$ 584 thousand), United States (US\$ 412 thousand), Mexico (US\$ 249 thousand), Kenya (US\$ 249 thousand), India (US\$ 92 thousand), and the Netherlands (US\$ 88 thousand).

Considering the results, Colombia presents the highest participation in the Canadian market, going from US\$ 31.8 million to US\$ 38.7 million, between the years 2013 and 2022. This behavior responds to the excellent agroclimatic conditions of this country, reflected in products of excellent quality (Rivera, 2021). Likewise, given the experience of Colombian agro-exporters there are standardized negotiation processes, agile commercial solutions, in addition to proximity of producing zones to international airports. In this sense, according to Pinzón-Muñoz *et al.* (2022), Colombia strives to strengthen its competitiveness in the international market. To achieve this, the consolidation of new products and the positioning of the broad variety of flowers available in the flower producing sector are essential, with the objective of successfully entering the international markets. Colombia currently has the



Figure 1. Value of imports in Cadada in the rose market.

A) Import of roses from the main countries (2013-2022). B) Import of roses from Mexico (2007-2022). Source: Prepared by the authors with data obtained from TRADEMAP (2023).

signature of a Free Trade Agreement with Canada, which benefits it with 0% customs duty in this type of products (Ministerio de Comercio, Industria y Turismo, 2011), aspects that hugely benefit this agribusiness. It should be mentioned that it also has great challenges in logistics and conservation technologies that have not allowed it to consolidate and position itself further in international markets.

For its part, the participation of Ecuador in the years from 2013 to 2022 presents a decrease in the behavior of the market of roses in Canada, going from US\$ 29.7 million in the year 2013, to the lowest sale average of US\$ 15.3 million in the year 2020, until reaching US\$ 25.9 million for the year 2022. The great waver of this country is in relation to the innovation in the final product with special interest in the trade of roses of excellent quality. Flower producers have made investments in improving their knowledge, abilities and capacities, in addition to adopting technologies which benefit the differentiation of the product exported. In a similar way, the great challenges that must be faced are recognized, due to the high production costs and logistic processes for export. For the year 2023, Canada established a customs duty of 10.5% for the entry of flowers from Ecuador (Canada Border Services Agency, 2023), becoming a disadvantage compared to other competitors.

Finally, for the case of the import of roses from Mexico, Figure 1B) evidences the behavior between the years 2007 to 2022. The behavior has been very fluctuating in the years studied, with unprecedented results for the years 2021 (US\$ 174 thousand) and 2022 (US\$ 249 thousand), respectively. These results show the current interest that has been generated by this product in the Canadian market and the business opportunities that can be established benefitting international trade. Mexico has agricultural production, standardized export processes, specialization in logistics, a Free Trade Agreement (T-MEC) which benefits it with 0% of customs duty (SIICEX/CAAAREM, 2023), elements that make Mexico a strategic ally with a promising future in the region.

Without a doubt, this is a great opportunity for agricultural producers of roses in our country, which often express their desire to obtain a better remuneration for their production. However, they face a scarce number of options in terms of trade channels, in addition to lacking counseling regarding foreign trade, which leaves them with very little information available. In their search for new opportunities, they have started to explore foreign markets with the hope of obtaining higher profits thanks to more favorable prices or, alternately, an increase in the volume of sales. It is important to highlight that the export business is not limited exclusively to large companies. Thanks to the advances in information technology, communication and transport, management has become more accessible, regardless of the size of the business, which could doubtless benefit the small-scale rural economic units.

Import of roses in the Canadian market (2022)

For the year 2022, Table 2 shows that Colombia and Ecuador represent 95.8% of the imports of roses under the customs duty fraction 060311. This situation shows a very high penetration into the Canadian market by these two countries, which represents approximately US\$ 64.5 million from a total of US\$ 67.3 million. Meanwhile, Mexico has a very small participation of only 0.4% of the total imports. Although reviewing the growth rate (2022 *vs.* 2021), it presents the highest growth (43%) compared to the other importing

countries, followed in order of growth by the United States (32%), Ethiopia (21%), Ecuador (14%), among others. Another one of the aspects to analyze is the price of the unit value, which was on average for the countries at US\$ 4.57 per dozen; Mexico attained a better quote, receiving payment of US\$ 7.98 and at the same time far exceeding the behavior reached by countries like Colombia, Ecuador and India. This can be verified in Table 2, which could be because of scarcity of product in this lapse of time, production costs, limited offer of the producing countries, increase in demand, and variation in exchange rate, among others.

Until now, we have identified that Mexico has many aspects that can be key to drive this highly competitive national agroindustry. However, the country faces important internal and external factors that will have to be addressed to reach its full potential. Next, Table 3 describes the most outstanding aspects about the strengths, weaknesses, opportunities and threats from the international market of roses between Mexico and Canada, which ought to be analyzed in greater detail for managerial decision making.

Competitive management for the consolidation of the export market of roses from Mexico to Canada

The consolidation of the export market between Mexico and Canada could have significant benefits for the growth of the agricultural production of roses in the current producing states, as well as for the opening of new cultivation areas in potential states. This could generate productive projects with positive impacts in the economy, society and rural communities, as well as in the creation of opportunities that promote the interest for primary production, the creation of formal employment in rural communities, rural development and generational replacement that attracts the attention of young people. Table 4 shows the proposals for strategies based on competitive management that could be implemented in the rural economic units.

Countries	Value imported in 2022 (thousands of USD)	Import share for Canada (%)	Quantity imported in 2022* (dozen)	Unit value (USD/unit)	Growth rate of imported values between 2021 and 2022 (%, p.a.)	Average tariff (estimated by Canada)
World	67,386	100	14,752,069	4,57	8	-
Colombia	38,668	57.4	7,363,203	5,25	4	0
Ecuador	25,886	38.4	6,456,108	4,01	14	10.5
Ethiopia	1,044	1.5	383,776	2,72	21	0
Guatemala	584	0.9	408,189	1,43	7	10.5
USA	412	0.6	31,268	13	32	0
Kenya	331	0.5	44,758	7,40	-54	10.5
México	249	0.4	31,200	7,98	43	0
India	92	0.1	20,200	4,55	4	10.5
Netherlands	88	0.1	9,714	9,06	-17	2.5
Other countries	32	0.1	3,653	-	-	-

Table 2. Import of roses in the Canadian market (2022) –customs duty fraction 060311.

*Note: 1 dozen is 12 units of rose stems. Source: Prepared by the authors with data obtained from TRADEMAP (2023).

Tabla 3. Strengths,	Weaknesses,	Opportunities,	Threats Analysis.
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Strengths	Opportunities
 The country is strategically located close to Canada, which represents competitive advantages in export logistics over other competing countries (Colombia, Ecuador, Ethiopia, Kenya, Guatemala). Mexico is among Canada's top 10 trading partners in the import of roses identified with tariff item (060311). The country has extensive experience in exports, including perishable food products, which facilitates the logistical handling of roses. By 2023, Mexico has a rose production area of approximately 1,746 ha, which represents growth compared to other years. Mexico has a long history of rose production, which implies that there is knowledge of agricultural practices, use of technology, and skilled labor, among other things. Mexico has international logistics infrastructure (airports, highways, seaports, and customs). Production and labor costs can make the supply price more competitive. Confidence in trade relations between Canada and Mexico. Experience in the logistics process of agricultural products between Canada and Mexico. Public policies that encourage agricultural production and the social welfare of producers. 	 Access to the Canadian market through the T-MEC trade agreement. Productive economic units in the state of Mexico with entrepreneurial capacity and export experience. Canadian marketers are open to new international suppliers that meet quality, delivery time, and price standards. The rose-producing states in Mexico offer suitable agro-climatic conditions for the formulation and development of rose growing projects. Organize groups of rose growers with interest in the export market. Canadian consumers interested in products free of residues and/ or toxic traces. Fair trade tendency on the part of the specialized niche market Demand for product at specific seasons (Mother's Day, Valentine's Day, Thanksgiving, Christmas) and other holidays. Attract foreign investment by developing greenhouse projects in the producing areas to increase flower production in the country. Establish a distribution center specialized in flowers that articulates the national production to Canada, the United States and other countries. Diversification of agricultural crops that are related to different value chains and have an impact in terms of competitiveness in the markets. Manage agreements and strategic alliances between the public, private and/or social sectors. Generate added value through the creation of products such as oils, soaps and perfumes. Agricultural production of roses in Canada is very limited due to agro-climatic conditions.
Weakness	Threats
 Domestic agricultural production is mainly focused on the domestic market. In some Mexican states, agricultural producers do not have patents on the materials used, which makes the export process impossible. Non-compliance with royalty payment requirements for plant varieties marketed under UPOV 78 and the new UPOV 91 revision. Failure to pay patents to breaders on some occasions, resulting in products that are unattractive to the Canadian market. Lack of organization and administrative management of production units to comply with quality requirements and export certifications. Deficiency in logistical infrastructure (cold chain) to ensure that the quality of production meets export requirements. Aging of agricultural producers and lack of generational replacement to carry out farm work. Scarce product quality certifications. Adverse environmental effects due to the irrational use of resources, contamination of water, soil, air, and the disposal of plastic waste, among others, causing environmental alterations. Risk of contracting diseases due to the misuse of agrochemicals in agricultural production. 	 Implementation of attack strategies by other competing countries. Shift to other types of flowers (Alstroemeria, chrysanthemums, orchids, tulips, gerberas, etc.). Increase in phytosanitary import requirements by the CFIA (Canadian Food Inspection Agency). Decrease in the price of flowers in the market. Higher labor costs. Exchange rate volatility that destabilizes the market. Sanctions against growers under Mexico's plant variety law. Vulnerability to rising international oil prices, as chemical inputs such as urea, plastics, and freight costs tend to increase in response to higher hydrocarbon prices. Economic crisis (financial crisis, economic slowdown, pandemic, etc.). High exposure to uncontrollable factors such as climate change (hailstorms, frost, excessive rainfall, winds), diseases and pests. Natural disasters (floods, landslides, etc.). Deficient research and development of new varieties and production techniques at the national level by academia.

Source: Prepared by the authors.

Producers should promote the organization of their members in order to have the possibility of obtaining joint benefits, for example, in the processes of purchasing and negotiating agricultural inputs. Organization of agricultural As well as for access to programs, support and financing to improve their production practices and producers systems. Finally, they should strive for legal organization, which will allow them to market their products for export. The producers must be formally constituted from the administrative, fiscal and legal point of view, in order Administrative organization to be able to exercise the pertinent controls and have certainty of the results of their actions, in order to be able to offer their products at competitive prices and enter the international market. It is essential to take advantage of the information available to standardize and guarantee the traceability of processes in areas such as production, packaging and logistics, in order to reduce costs. In addition, Information management this information can be used to forecast and predict market behavior, identify price trends and perform customer analysis, all of which will benefit strategic decision making. Through negotiation processes, establish favorable commercial agreements with buyers at the final Commercialization destination. Market research, prospecting, contract farming, market intelligence, consumer behavior, among others. Identify potential provinces and territories in Canada with interest in the Mexican product, followed by **Commercial missions** attending trade events, advertising in specialized magazines, traditional advertising campaigns and social networks, to publicize the Mexican product. Reinvestment plans in rural Agricultural producers should work on developing plans for future reinvestment in their production units economic units to help improve productivity through access to training and the use of information technologies. Existing and planned infrastructure, machinery and equipment must be adequate to establish production systems suitable for export. The facilities must comply with a minimum recommended design to be able to apply greenhouse production management techniques that ensure conditions for **Technology management** air circulation, humidity and adequate lighting for the production of high quality roses. Specialized infrastructure is required for post-harvest handling of export roses to preserve, grade, and pack the roses according to international export standards, as well as facilities that comply with occupational health and safety conditions. Good agricultural practices should be applied to ensure the production of high quality roses, including Technology for agricultural fertilization, pest control, pruning, disease control and above all, the indiscriminate reduction of agrochemicals, since export flowers tend to be better accepted when production practices are production environmentally friendly. As production processes become more efficient and focused on obtaining products with export characteristics, quality controls will be implemented to select the best flowers for export, taking into Quality control account aspects such as color intensity, stem thickness and length, quality of the rose bud, and crop management during harvest to ensure that the flowers are harvested without affecting their physical appearance. Producers must have a transport system that ensures the export specifications, that there is an adequate cold chain and that the transport for export is adequate. In this aspect, it is also necessary to have the **Export logistics** appropriate advice to comply with the characteristics of export logistics. Focus on advancing crop and final product certification, with emphasis on the ecological profile, Certifications sustainable production and low CO₂ footprint. As well as sustainable water use, waste management, rational use of agrochemicals and occupational health and hygiene for workers. For imports, it is essential to establish pest and disease prevention processes, as well as adequate postharvest handling. This must be accompanied by compliance with minimum quality requirements, which Regulations include obtaining an import permit, presenting phytosanitary certificates and complying with labeling and labeling standards. For marketing purposes, especially for export, agricultural producers will have to abide by the regulations incorporated in the T-MEC regarding intellectual property. Thus, they will have to take **Plant Variety Property** into account the provisions of UPOV 1991, which is important in the export of roses from Mexico to **Rights UPOV 1991** Canada because it protects the property rights of breeders and complies with international standards and requirements.

Table 4. Competitive management strategies for the export of roses from Mexico to Canada.

Source: Prepared by the authors.

CONCLUSIONS

This study assessed in depth the perspectives of export of roses from Mexico to Canada. The results evidence a promising market and a growing demand from the Canadian market, which suggests significant opportunities for Mexican rose producers. In addition, competitive management strategies have been proposed which could strengthen Mexico's position in the export market of roses to Canada. The combination of the quality of Mexican products, the experience of complying with high international standards, the geographic proximity to Canada, the free trade agreement (T-MEC), and the competitive management strategies proposed position Mexico favorably in this market. However, it is essential for agricultural producers and government authorities to work hand in hand to overcome the regulatory and logistic challenges that can emerge in the export process. Finally, this study shows the importance of taking advantage of available commercial opportunities and promoting collaboration between the public and private sectors to drive the growth of the rose agroindustry in Mexico and to contribute to the economic development of the country. With an intelligent approach and a strategic execution, Mexico has the potential of becoming a prominent actor in the export market of roses in Canada for the coming years.

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REFERENCES

- Avendaño Ruiz, B. D., Sierra López, O. A., & Cabezas Mora, W. F (2023). Competitividad de las empresas exportadoras de flores cortadas desde Colombia en el mercado de Estados Unidos de América, 2000-2019. *Ciencia y Tecnología Agropecuaria*, 24(2), e2920. doi.org/10.21930/rcta.vol24_num2_ art:2920
- Canada Border Services Agency (2023). Departmental consolidation of the customs tariff 2023. Disponible en: www.cbsa-asfc.gc.ca
- Darras A (2021). Overview of the Dynamic Role of Specialty Cut Flowers in the International Cut Flower Market. *Horticulturae* 7(3):51. doi.org/10.3390/horticulturae7030051
- De León, L. G (2018). La globalización y su influencia en la agricultura. *Anuario Jurídico y Económico Escurialense*, 51, 389-410.
- Egea, F. J., López-Rodríguez, M. D., Oña-Burgos, P., Castro, A. J., & Glass, C. R. (2021). Bioeconomy as a transforming driver of intensive greenhouse horticulture in SE Spain. *New Biotechnology*, 61, 50-56. doi. org/10.1016/j.nbt.2020.11.010
- Faust, J. E., & Dole, J. M (2021). The global cut flower and foliage marketplace. Cut Flowers and Foliages; Faust, JE, Dole, JM, Eds, 1-47. Boston: CABI. doi: 10.1079/9781789247602.0001
- Foreign Agricultural Service (2021). Global Agricultural Trade System on line. Disponible en: https://apps.fas. usda.gov/gats/default.aspx
- Gobierno de México Secretaría de Agricultura y Desarrollo Rural SADER (2019). Tratados comerciales, un punto a favor de México. Disponible en: https://www.gob.mx/agricultura/articulos/tratadoscomerciales-un-punto-a-favor-de-mexico
- Melo Perdomo, S. M., Orrego, C., Gómez Roldan, I. y Gil Palacios, J. A (2018). Potencial competitivo de tres MiPyMEs del sector agroindustrial de la provincia de Ubaté, Colombia. Revista de Administración de Negocios, Edición especial, 145-170. doi.org/10.21158/01208160.n0.2018.2022

- Ministerio de Comercio, Industria y Turismo (2011). Eliminación arancelaria Colombia –Canadá Lista Productos Agrícolas de Colombia. Disponible en: http://www.tlc.gov.co/TLC/media/media-TLC/ Documentos/Lista-Productos-Agricolas-de-Colombia.pdf
- Pinzón Muñoz, C.A., Peña Jiménez, Y.E., Cuarán Ramos, N.L., & Rendón Méndez, A.C (2022). Sector floricultor colombiano en los TLC con Canadá y República de Corea. *Podium*, 42, 117-136. doi:10.31095/podium.2022.42.7
- PROMÉXICO (2018). Mapa de ruta nacional de logística. Disponible en: http://www.elogistica.economia. gob.mx/work/models/elogistica/Resource/3/1/images/Mapa%20de%20Ruta%20Nacional%20de%20 Logistica.pdf
- Ramírez Rojas, J. L (2017). Procedimiento para la elaboración de un análisis FODA como una herramienta de planeación estratégica en las empresas.
- Rivera, J (2021). Pymes del sector floricultor colombiano: Análisis financiero 2014-2019. Revista Disciplinaria en Ciencias Económicas y Sociales, 3(2), 1-24. doi.org/10.47666/summa.3.2.36
- SIACON (2023). Sistema de Información Agroalimentaria de Consulta (SIACON). Secretaría de Agricultura y Desarrollo Rural (SADER)
- SIICEX/CAAAREM (2023). Sistema Integral de Información de Comercio Exterior. Disponible en: http:// www.siicex-caaarem.org.mx/bases/tigie2007.nsf/d58945443a3d19d886256bab00510b2e/8d9d590cd1 d7936f862573020072a672?OpenDocument
- Solís Lozano, J.A., Cuellar Núñez, L., Vivanco Vargas, M., Méndez Gallegos, S. de J., & Vasco Leal, J. F. (2022). Strategic and competitive advantages of the agricultural sector in Querétaro, Mexico. Agro Productividad. doi.org/10.32854/agrop.v15i2.2099
- TRADEMAP (2023), Estadísticas del comercio para el desarrollo internacional de las empresas. Disponible en: https://www.trademap.org/Index.aspx
- Tyce, M (2020). A 'private-sector success story'? Uncovering the role of politics and the state in Kenya's horticultural export sector. *The Journal of development studies*, 56(10), 1877-1893. doi.org/10.1080/002 20388.2020.1715944
- Vasco Leal, J.F., Cuellar-Nuñez, L., Vivanco-Vargas, M., Solís-Lozano, J.A., Díaz-Calzada, M.E., & Méndez-Gallegos, S.J. (2022). Agribusiness potential of castor oil plant (*Ricinus communis* L.) in Mexico. Agro Productividad. doi.org/10.32854/agrop.v15i5.2267
- Velázquez-Torres, A. L., Callejas-Juárez, N. y Martínez-Castañeda, F. E (2022). Análisis de competitividad del sistema de rosa para corte (*Rosa* sp.) en el entorno mexiquense. *Terra Latinoamericana*, 40, 1-9. e948. doi. org/10.28940/terra.v40i0.948

