

Strategies of mexican pork producers in the japanese market

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Received January 5, 2015; Accepted June 1, 2015

Abstract

Mexico and Japan signed an Economic Complementarity Agreement that came into force in 2005. Japan is a major consumer of pork and pays excellent prices for it. This paper attempts to determine the production and business strategies that have enabled major Mexican pork companies to penetrate the Japanese market in order to recommend them to other pork producers. A survey was drawn up and applied to pork producers in the states of Jalisco and Sonora. It was found that pork production is intended for both the domestic (80%) and international (20%) market, that extensive and intensive production is used, and that the PIC Genetic Line breed is preferred because it reduces costs. Farmers produce their own feed, taking care to ensure that quality control and nutritional requirements are met. The main pork export destinations are the United States and Japan, taking care of disease control, type of feed, vaccines and medicines.

Economic complementarity agreement, production strategies, business strategies, Japan, pork production

Citation: GÓMEZ, Alma and PÉREZ, Francisco. Strategies of mexican pork producers in the japanese market. ECORFAN Journal-Ecuador 2015, 2-2:98-108

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Introduction

Mexico's entry into GATT in 1986 marked the beginning of the country's trade liberalization policy and therefore the reduction of barriers to the import and export of products. Within the negotiations of tariff fraction groups, those of the primary sector received most-favored-nation treatment, i.e. they pay preferential tariffs. Continuing this trade liberalization, Mexico and Japan signed an Economic Complementarity Agreement (ECA) which came into effect in 2005. Japan is a major consumer of pork (Dyck and Nelson, 2007) and is known for paying excellent prices for it. The pig carcass price in Japan is \$209 per 100 pounds, while in South Korea it is \$189, in China \$160, in Russia \$139, in Spain \$123, in the US \$94 and in Canada 91 (Stuart, 2013). It is noteworthy that even though Mexico is not very competitive in the production of animal feed, in recent years it has managed to increase its livestock exports to Japan.

Moreover, Mexican pork is very popular in Asian markets. This year has also seen Mexican pork producers make additional inroads into the Asian market, such as the incorporation of Jalisco into the group of states authorized to sell their products to Japan after providing proof that it is free of classical swine fever, and the authorization granted by Chinese authorities to four Mexican pork processing plants. It should be pointed out that Japan suffered outbreaks of foot and mouth disease in 2010 (Anonymous (b), 2010) and was forced to move livestock (Anonymous (a), 2010) and sacrifice a considerable number of head of pigs and cattle (Anonymous (c) 2010). Therefore, the demand for meat products will increase in the coming years.

In this context we set ourselves the goal of determining the production and business strategies that have enabled the major Mexican pork companies to penetrate the Japanese market in order to suggest them to other producers of pork and other livestock products. Our two-fold working hypothesis was as follows: 1) Mexican pork is popular in Asian markets for its quality and freshness and 2) The effectiveness of animal health programs has enabled the development of Mexican pork exports.

Justification

Pork is a very important product for Japan. The access achieved by Mexico includes an export quota within which Japan provides preferential treatment to Mexican exports, which mainly consists of a reduction in the integrated import price (IIP) of 11 yen/kg for fresh refrigerated or frozen pork cuts, and a reduction of 37 yen/kg for processed pork cuts (mainly hams).

Year	Quota	Volume exported
2005	38,000	35188
2006	53,000	40358
2007	65,000	48345
2008	74,000	56550
2009	80,000	43681

Table 1 Quota negotiated in the Economic Complementarity Agreement for Mexican pork exported to Japan. (Metric tons)

As can be seen in Table 1, from 2006 Mexico's pork exports were substantially less than the quotas set out in the Economic Complementarity Agreement. Therefore, there is a significant window of opportunity for Mexican pig producers that has not yet been fully exploited.

Pork is currently the most consumed meat worldwide; its demand, in recent decades, has seen a sharp increase. This is due to changes in consumption patterns in developing countries. Pig farming is the fastest growing livestock subsector, with the number of animals reaching one billion by 2015, double that of the 1970s. Pork production is distributed worldwide, with the exception of some regions that maintain certain cultural and religious reservations regarding the consumption of pork (FAO, 2014).

The nutritional, economic and social importance of this meat is undeniable. In Mexico, in 2010, pork was the second most consumed meat only after chicken. The pig is now among the most efficient animals in terms of meat production; its particular characteristics, such as great precocity and prolificacy, short reproductive cycle and high nutrient processing capacity, make it particularly attractive as a food source (FIRA, 2012).

For many years pork was considered as a food of very little nutritious value, and associated with diseases and parasites. However, in recent years, nutritional qualities have been found that are comparable with those of red and white meat. Moreover, during this same period, fat content has been reduced by 31%, calories by 14% and cholesterol by 10%, thanks to technological advances in pig production in the world.

In addition to Mexico's previous economic model that maintained a closed economy, the country also suffered several epidemics of cysticerci in 1920, 1954 and 1980-1981 (De Aluja, accessed 16 March 2014). With regard to classical swine fever (CSF), the first outbreak was recorded in 1883 in the Bajío area.

By 1980 the first campaign for CSF control and eradication was established through various actions that allowed declaring the area CSF-free by 1983. Also in the period 1983-1991 in the central-western area of Mexico with immunization coverage from 45-55% of pigs, outbreaks occurred cyclically with greater than 50% morbidity and mortality. Immunization coverage reached 93% in 1992 and 97% in 1993, which enabled reducing the number of cases to zero (Morilla and Carvajal, 2002). In 1998 there were again CSF outbreaks in the area under eradication, spreading the disease. By 2003 the country was divided into two zones, one CSF-free in Sonora and the northern states of the Yucatan Peninsula, and the rest of the country where the disease was present and vaccination was needed. From the second half of 2007 the disease was only found asymptotically in some regions of the country, and by January 2009 it was announced that CSF had been eradicated after several years of efforts (Ferrer et al, 2010). The fact that these animal health problems have been successfully controlled currently allows this product to be exported.

Pork carcass production is largely concentrated in two Mexican states: Jalisco and Sonora, which account for 18.9% and 18.2%, respectively, of domestic production. Jalisco supplies the domestic market, while Sonora's production is mainly export-oriented. Other notable pork-producing states include Guanajuato (9.4%), Puebla (9.3%) and Yucatan (8.4%). The remaining 35.8% of production is accounted for by all the other Mexican states combined (Financiera Rural, 2012). Table 2 shows the evolution of the volume in metric tons that Japan has imported from NAFTA countries for four-year periods. It should be noted that in the analyzed period, the United States and Canada doubled their export volumes, while Mexico increased its export volume at a lower rate.

On average, in this period the US accounted for 57% of total Japanese pork imports from these three countries, compared to 34% for Canada and only 9% for Mexico.

	1997-2000	2001-2004	2005-2008	2009-2012
Canada	315231	682708	686929	697470
United States	654053	987982	1147751	1224600
Mexico	132225	149974	180441	171440

Table 2 Amounts of pork imported by Japan (metric tons)

(Source: Author-made based on data from Japan's Ministry of Finance. www.customs.go.jp/toukei/srch/indexe.htm (accessed 18 Dec. 2012))

On the other hand, in Table 3 we see the value of these imports in millions of yen. During the period of analysis both the US and Canada obtained on average 553,000 yen per metric ton, while Mexico obtained 576,000 yen per metric ton. The fact that it pays a better price for Mexican pork shows the value that the Japanese market places on the high quality of Mexican meat.

	1997-2000	2001-2004	2005-2008	2009-2012
Canada	177554	406454	367289	365791
United States	384359	594597	613969	627463
Mexico	73659	98177	102688	90380

Table 3 Value of pork imported by Japan (thousands of yen)

Theoretical Framework

The formation of the global livestock market began after the Second World War. Thereafter different processes began that resulted in a new economic order. Production of some food products was also reorganized on a commercial basis that has a global exchange. In various developing countries agricultural production for domestic consumption has been switched to an export focus, benefitting global capitalism.

The basis of the new international division of labor is the direct employment of a large number of workers with low production costs in foreign territories to perform standard production tasks.

The global system has been able to develop thanks to a global system of suppliers, consumers and circulation that emerged in recent years instead of bilateral trade arrangements that are now economic blocs. The global economy is also an information economy; that is, an economy in which productivity growth is not dependent on a quantitative increase in the factors of production (capital, labor, natural resources), but the application of knowledge and information to management, production and distribution both in processes and products (Foray and Freeman, 1992; cited by Borja and Castells, 1997: 25). The generation and strategic processing of information have become essential factors in productivity and competitiveness in the new economy (Dosi, 1988; cited by Borja and Castells, 1997: 25).

The importance of location in the food supply

Supply analysis departs from the macroregional, regional and subregional environment, taking into account the identification of production areas and demand centers and the behavior of the various linkages involved in the chain; from there the functionality of this national food system is established. The information economy is also characterized by a flexible production model, built around the increasingly widespread practice of the company-network. By this term we do not mean a network of companies, but a new form of organization.

What we are seeing in the economy (and to a large extent in society as a whole) is the decentralization of large enterprises, creating semi-autonomous management units: the proliferation of small and medium-sized enterprises, and the formation of cooperation networks between small and medium-sized enterprises, between small ones and between large ones, thereby forming networks of networks (IHMAI, 1990 cited by Borja and Castells, 1997: 25). Since strategic alliances between large companies vary according to product lines, technology, market or country, we can consider that the new structure of the economic system consists of specific, ever-changing networks in a variable geometry system (Borja and Castells, 1997: 25).

Competitive strategy

Competitive strategy is largely based on a deep understanding of industrial sectors and competitors. Competitive strategy is a combination of the goals that the company seeks and the means (policies) by which it tries to achieve them. The formulation of a competitive strategy essentially consists of linking a company with its environment (Porter, 2004). Three general strategies for achieving a competitive advantage are: cost leadership, differentiation and focus. The decisive factor when profitability is calculated is to know whether companies can get the value they generate for customers or whether they will lose them to the competition (Porter, 2009).

The basic criterion of an above-average performance over the long-term is the sustainable competitive advantage. Although a company may have many strengths and weaknesses compared to its rivals, there are two basic types of competitive advantage within its reach: low costs and differentiation.

Ultimately, the importance of a strong or weak point depends on the impact it has on the relative cost or differentiation. Both variables come from, in turn, the industry structure. They originate from the ability to better deal with the 5 factors than its rivals (Porter, 2009). The two basic types of competitive advantage, combined with the scope of activities for which companies seek to achieve them, give rise to three generic strategies to achieve above-average industry performance: cost leadership, cost focus and differentiation focus. The focus strategy has two variants: cost focus and differentiation focus (Porter, 2009).

Cost leadership

This kind of leadership is perhaps the clearest generic strategy. In it, an organization sets out to become the low-cost producer in its industry. It has a broad scope, serves many industry segments and may even operate in related industries; its breadth is often important to its cost advantage. The sources of this advantage are varied and depend on the structure of the industry. They may include the pursuit of economies of scale, proprietary technology, preferential access to raw materials and other factors (Porter, 2009). A cost leader must reach parity or proximity in differentiation against the competition to be a leading participant, although its competitive advantage is founded on cost leadership. Differentiation-based parity allows it to translate its advantage directly into higher profits than its rivals. Differentiation-based proximity means that the price discount necessary to achieve an acceptable share in the market does not offset the cost advantage and hence the leader earns above-average returns (Porter, 2009).

Differentiation

It is the second generic strategy.

In it, the firm seeks to be unique in its industry in some aspects widely valued by buyers. It selects one or more attributes that it considers important and uniquely positions itself to meet those needs. Its uniqueness is rewarded with a higher price (Porter, 2009).

Every industry has its own means for differentiation. It can be based on the product itself, the delivery system by which it is sold, the marketing approach and many other factors (Porter, 2009). The logic of the differentiation strategy requires that the company select attributes that are different from those of its rivals. If it wants to set a high price, it must be truly unique in something or be perceived as such. But unlike cost leadership, there may be more than one successful strategy in an industry if there are several attributes valued by many customers (Porter, 2009).

Focus

The third generic strategy differs radically from the previous two because it is based on the choice of a narrow competitive scope within an industry. The company selects a segment or group of segments in it and tailors its strategy to serving them to the exclusion of others. By focusing on them, it seeks to achieve a competitive advantage despite not possessing a competitive advantage overall (Porter, 2009).

The focus strategy has two variants. In the cost-based focus, the company seeks an advantage of this type in the target segment, while in the differentiation-based focus it seeks to distinguish itself in it. Both variants are based on the differences between target segments and other segments in the industry. The former must have customers with unique needs, because otherwise the production and delivery system that best serves them must differ from that of other segments.

The cost focus exploits differences in cost behavior in some segments, whereas the differentiation focus exploits the special needs of the members of certain segments. It is assumed that the segments are poorly served by competitors that also have other customers. Thus, the firm can achieve a competitive advantage by exclusively devoting itself to the segments. Without a doubt the target segment has a varied breadth, but the focus essentially consists of exploiting the small differences in the segment compared to the industry as a whole. A rigorous focus in no way guarantees outstanding performance (Porter, 2009). If cost leadership and differentiation are obtained simultaneously, huge rewards will be achieved because the benefits are additive; differentiation causes high prices and cost leadership means lower costs (Porter, 2009).

The Value Chain

The value chain contains total value and consists of value activities and margin. It involves physically and technologically specific activities that are carried out. They are the structures by which a product useful for buyers is created. Margin is the difference between total value and the actual cost of making them. It can be measured in various ways. Also, the supplier and channel value chains introduce a margin that should be isolated to understand the causes of a firm's cost position, since the margin of each one is part of the total cost charged to the customer (Porter, 2009).

Focus or concentration

The focus is aimed at a buyer group, product line segment or geographic market; like differentiation, it adopts a multitude of modalities.

This seeks above all to give excellent service to a particular market. It is based on the assumption that the company may provide better service to its segment than companies competing in larger markets, by doing it at a lower price to accomplish both goals (Porter, 2004). Competitive strategy involves positioning a company to take maximum advantage of the value of the capabilities that distinguish it from its rivals. From this we can deduce that a central aspect of the formulation of strategies is to analyze the competition thoroughly (Porter, 2004).

The business strategy

The business strategy is the plan to bring products to market and survive over time; such a strategy is a combination of tools that allow the company to reach its intended market.

Methodology

Deductive and comparative methods were used. For the methodological development of this research, a qualitative survey was drawn up and applied to pig producers (production units) in the states of Jalisco and Sonora.

The aim of the survey was to carry out an analysis of the strategies used by pig producers to enter and remain in the Japanese market, as well as to meet the country's animal health and presentation requirements.

The survey consists of 3 sections: questions about some features of the production units (type of farming, breeds with which they work, feed), international market (exporting states, export destinations, intermediaries) and the Japanese market (demands of the Japanese market, strategies to remain in the Japanese market).

It was determined that a total of 37 direct surveys would be applied to 37 production units, which are considered a representative sample of the population under study. This sample was defined based on the size of the population.

A sample size of 37 production units was determined, taking as a reference a population of 42 production units located in the states of Jalisco and Sonora, which are the states that export to Japan. The database was obtained from the Association of Pork Producers. By applying the following equation (1), we were able to determine the sample size by the proportions mentioned:

$$n = \frac{pqNZ^2}{E^2(N-1)+Z^2pq} \quad (1)$$

Where:

N: is the population size. (N=42)

Z= is a constant that depends on the confidence level assigned; 90% confidence level (Z=1.65).

E: is the desired sampling error. (E=5%)

p: is the proportion of individuals in the population that possess the study characteristic. (It is assumed that p=q=0.5, which is the safest option).

q: is the proportion of individuals that do not possess that feature, i.e., it is -p. (q=0.5)

n: is the sample size. (n=37)

The results of the surveys applied were systematized in the Excel software package for further analysis. A literature review of sources such as Japan's Ministry of Finance, FAO, USTDA, SAGARPA and SIAP was performed in order to present an analysis of the international and domestic pork market.

Results and Discussion

It was found in the fieldwork that the meat produced in the production units surveyed is intended for both the domestic and international market, as can be seen in Figure 1. Of the production obtained, it is estimated that 80% is to meet domestic demand and the rest is for export (Figure 2).

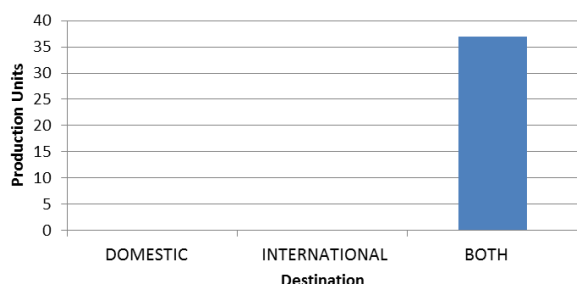


Figure 1 Product Destinations

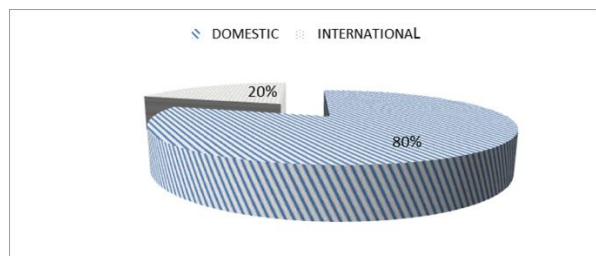


Figure 2 Product Destinations (Percentage)

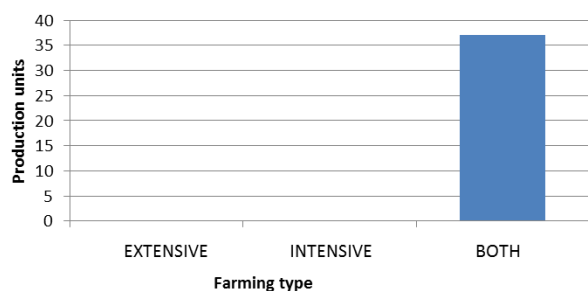


Figure 3 Farming Type

Figure 3 shows that both extensive and intensive production methods are used in all the production units where the surveys were conducted; this is because piglets are treated differently after weaning compared to those animals which are old enough to be fattened.

In Mexico the most commonly used pig breeds are Hampshire, Landrace, Duroc-Jersey, Yorkshire and PIC (Genetic Line) and we found that the production units prefer the PIC Genetic Line, because they consider this breed as ideal due to the rapid growth of these animals which helps to reduce costs and obtain excellent quality meat (Figure 4).

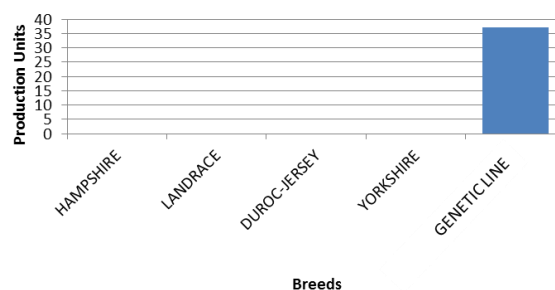


Figure 4 Breeds Used for Production

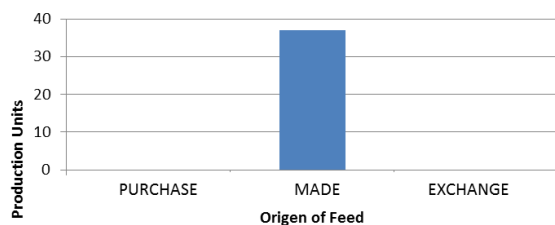


Figure 5 Origin of Feed

In Figure 5, we see that the surveyed production units prepare their own feed for fattening their pigs, because they have better control over quality and nutritional requirements to achieve efficient growth of animals and excellent meat quality, as well as taking care to ensure that ingredients banned in Japan are not added. However, the usual custom in Mexican pork production is to buy, produce or exchange for the feed given to their pigs.

Of the states selected for applying the survey, Sonora stands out because it is the leading pork-exporting state, followed by Jalisco which is just now making inroads into the Japanese market (Figure 6).

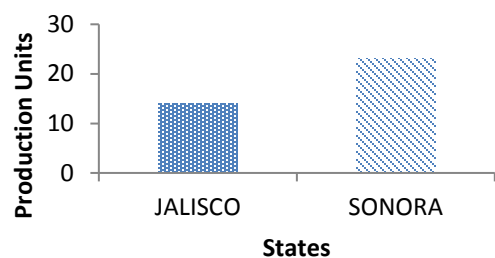


Figure 6 Pork-exporting states

Figure 7 shows that the main export destinations for Mexican pork are the United States and Japan. The European Union does not import Mexican pork, and while there are other markets, their export volumes are of minor significance so they were grouped together.

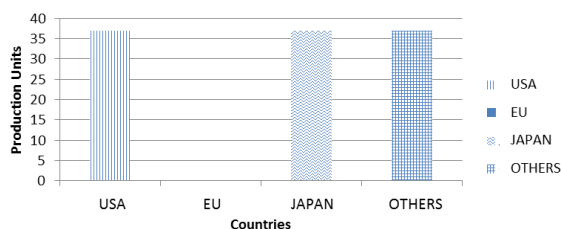


Figure 7 Export Destinations

More than 80% of Mexican pork exports are sent to the Japanese market, which is the largest consumer of Mexican meat. The US is the second largest consumer of Mexican pork, accounting for about 11% of the export total; the rest of the countries are South Korea, China and Russia, among others (Figure 8).

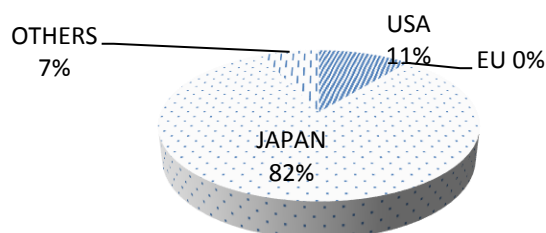


Figure 8 Export Market

Source: Author-made with survey data

From Figure 9 we conclude that the most important intermediary agent between the Japanese market and Mexican pig producers is the broker, who is in charge of drawing up purchase and sale contracts for 100% of the production units.

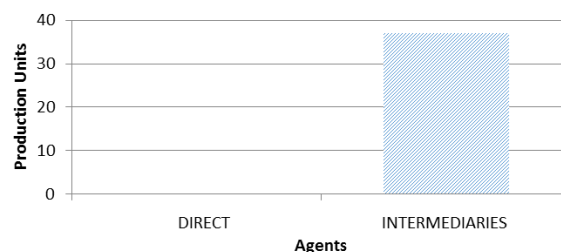


Figure 9 Marketing Agents

Mexican pork producers over the years have modified their production system to meet the requirements of the Japanese market. Among the most important actions taken in this context are the following:

- Implementation of a protocol for the use, handling and storage of chemicals on farms.
- Implementation of protocols for controlling needles on farms to have control over infections, prevent the transmission of pathogens, etc.
- Purchase of equipment to detect chemical residues.
- Purchase of metal and X ray detectors (to detect physical contaminants in the meat).

- Certification of a quality system audited by third parties.

Likewise, changes have been made in the presentation, such as in the product specification and specifications on the packaging for each new customer.

Pork produced in these production units is characterized by being fresh, having a good taste, and being one hundred percent safe. This has been achieved through sophisticated production systems and continuous improvement in health and hygiene conditions. Pigs in these production units are healthy and, therefore, the resulting meat is also lean and of high quality.

Advertising and gastronomic sampling are the main strategies used by Mexican producers to remain in the Japanese market. Tastings take place in self-service stores, and advertisements are placed on public transport, in the media, and on noticeboards, etc. Another activity is participation in trade fairs and exhibitions.

Other actions that are performed but in our country include fulfilling the commitment to deliver orders in a timely and proper manner (volume and mix), being price competitive, abiding by quality and safety standards and promoting the development of pork and raw material suppliers to achieve greater supply and continued growth in the Japanese market.

Conclusions

The Japanese market is important for Mexican pig producers due to the good price it pays for pork and its reliability in honoring its agreements. Moreover, Japan is the leading pork importer in the world so it has high demand for this product.

The most important production and business strategies in the pork market include: the exporting country or region is classified as free of cysticerci, classical swine fever, and the H1N1 virus (although, according to scientists, it is not transmitted by eating pork products); the type of feed consumed by the livestock, and vaccinations and medicines. Within the commercial aspects, we have product presentation, quality and frequency with which deliveries are made.

Mexican pork is prized by the Asian market. Countries like South Korea and Singapore are interested in signing trade agreements with Mexico and one of the products they are most interested in is pork. An agreement has already been signed with China under which some pig farms in Mexico can export to China. Therefore, it is necessary for our country to produce this product in sufficient quality and quantity to meet the needs of these markets.

Recommendations

It is important for the government to promote the production of livestock feed, because this input, when imported, increases production costs and reduces the competitiveness of our meat in the world.

It also needs to promote pork production in the country and the installation of Mexican Federal Inspection Type (TIF) slaughterhouses to meet international demand, as well as control the entry of pork into the country so that our producers do not have unfair competition from meat smuggled across the border or sold at prices below the cost of production.

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