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# **The Mexican Cattle and Beef Industry: Demand, Production, and Trade**

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## **Introduction**

To understand the potential for Mexican cattle and beef trade in the coming years, it is necessary to consider the Mexican beef cattle industry from a historical perspective as well as in the current economic environment. The following comments provide a brief overview of the Mexican cattle and beef industry and the evolving U.S.-Mexico cattle and beef trade relationship.

## **Mexican Beef Cattle Production Environment and History**

Since the last half of the 19<sup>th</sup> century, the Mexican beef cattle industry has consisted of two, nearly separate, market components. Beef producers in the arid and semiarid northern third of Mexico have largely focused on the production of calves for export to the United States. European beef genetics have been widely used in the region, beginning with imports of Hereford cattle and continuing with today's popularity of Angus and Brangus along with several continental breeds. For the most part, the young steers are exported to the United States while the heifers are used in the fledgling Mexican feedlot industry to produce quasi-U.S. style fed cattle.

The central and southern regions of Mexico, consisting of the temperate inland areas and the tropical and semitropical coastal areas, have historically produced grass-fed beef for the Mexican domestic or "national" market. These regions include a diverse group of small, mostly subsistence producers, who sell a small amount of beef in local markets, as well as dual purpose producers that use dairy-zebu cross cattle to produce both milk and beef. Grass finishing operations, located mostly along the gulf coastal region, assemble larger groups of grazing cattle until they are mature at 30 to 40 months of age to be slaughtered directly off of pasture. In earlier years, most cattle were shipped live from pasture finishing to urban centers, such as Mexico City, to be slaughtered in plants in and around the city and sold in nearby fresh markets. More recently, slaughter plants have been located in production regions with chilled carcasses shipped to urban markets.

Beef consumption in Mexico historically evolved as two very distinct markets. There has been a small feedlot industry in Mexico since the post-WWII period, located mostly in a belt across northern Mexico from Monterrey, Nuevo Leon, to Hermosillo, Sonora. These feedlots primarily fed the heifer mates of the steers exported to the United States. The fed beef was mostly consumed in northern Mexico, a region known for steaks and grilled meats. U.S.-style steak cuts have been popular in this region for many years. The animals were fed in feeding operations which resemble U.S. feedlots (although slightly less intensive), and produce a roughly Select quality beef carcass.

In contrast, the majority of Mexican consumers in the national market utilized grass-fed beef that was mostly consumed as thin-cut meats utilized in a variety of moist heat cooking methods. Beef was more likely to be cut in a European style and U.S.-style steak cuts were much less common. There is little quality differentiation in the traditional beef markets, although beef from an old cow might be noted in the market place as "average" as opposed to "superior" for a three to four year old grass-fed bull. It is important to remember that cow beef in Mexico was mostly consumed as muscle cuts rather than as ground beef.

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### **Change Drivers in the Mexican Beef Cattle Industry**

The Mexican beef cattle industry has seen tremendous changes in the last decade. As a result the industry is in the midst of fundamental restructuring and continues to change rapidly. The biggest source of change in the Mexican beef industry is the evolving nature of Mexican beef demand. Growing population and incomes along with continued urbanization of Mexico is resulting in increasing demand for beef and other meats. What is less generally recognized, is that Mexican consumer preferences for beef quality and type are also changing.

Mexican consumers have very rapidly developed a preference for fed beef in recent years. The preference is not for U.S.-style fed beef, which is finished to a much higher degree than is preferred in most of Mexico. Mexican consumers prefer meat from younger animals that were finished in a semi-intensive system. This beef has a small amount of white or cream-colored fat rather than the yellow fat typical of grass-fed animals. This Mexican-style fed beef is not only different than U.S. fed beef, but is also distinguishable from the more highly finished fed beef historically produced in northern Mexico.

U.S. fed beef typically comes from a European-cross steer fed for 140 to 170 days. Northern Mexican fed beef is from a similar European-cross steer fed for 120 to 135 days (or more likely a heifer fed for 110 to 125 days). The new style of Mexican fed beef typically consists of zebu-dairy cross bulls (rather than steers) fed supplement on pasture or a less concentrate-intensive feedlot ration for 45 to 100 days. Although these are different products, they can and do substitute in the marketplace, certainly more readily than grass-fed and grain-fed products substitute. Another trend in Mexican beef markets is reduced demand for cow beef. The fed beef from younger animals is highly differentiated from cow carcasses, which tend to have yellow fat and dark, coarse textured meat. Although hamburgers are becoming more popular in Mexico and more cows in the future will be used for grinding, it is possible that Mexico could become a surplus cow beef market.

Concurrently and inseparably with the beef demand changes described above is a widespread revolution in food retailing in Mexico. Mexican and foreign-owned large supermarket chains are increasingly important in most Mexican cities. Many remote rural villages still utilize local fresh meat markets; however, neighborhood meat shops in cities are being displaced by modern supermarkets. Meat marketing in most of Mexico is still carcass-based but the growing presence of supermarket chains facilitates product specialization as more popular products in various markets can be supplemented with imported boxed beef.

### **The Evolving Mexican Beef Cattle Industry**

Several trends are implied by the changes described above. One trend is a changing set of beef production systems throughout Mexico. Fewer cattle are finished on grass or on grass only. In the tropical and semi-tropical regions there is more use of pasture-based supplementation systems to produce a minimally finished animal that is 6 to 12 months of age younger than traditional grass-fed animals. Animals from these regions are being marketed as feeder animals to other regions for feedlot finishing. Decreased use of forage for finishing animals increases the potential to increase cow-calf and stocker production in these regions. In some areas where dual-purpose cattle have predominated, there is now more use of European breeds as a terminal cross to enhance beef quality. In many regions, disease, pest, and climate challenges of the tropical production environment still favor the use of hardy zebu genetics in cows.

Since most feedlots and feed grain production in Mexico are located in the northern part of the country, growing demand for fed beef in the national market may lead to a different pattern of regional cattle and meat flows. Cattle that were previously grown and finished in the same regions before moving directly into urban meat markets are now moving into other regions for feedlot finishing before slaughter. This means more cattle are moving from south to north. Feedlots in the northern part of Mexico that

previously fed northern, European-cross heifers and some steers for northern markets are now feeding more zebu-cross bulls and heifers for the national market.

Increased interregional movement of cattle and economic integration means there is more need for market information across regions. Additionally, regional animal health issues are viewed differently with increased interregional movement of animals. The northern states, with a strong motivation to maintain animal health status for export purposes, must now engage with other regions to achieve zoosanitary objectives. Most recently, improved quality of cattle from central Mexico is also increasing possibilities for exports of cattle from that region. The United States continues to maintain animal health guidelines that restrict direct cattle exports from many Mexican states. The economic integration of regional cattle markets in Mexico means that country will be more motivated to address animal health issues on an integrated national scale.

The regional integration of cattle and beef markets in Mexico has also promoted development of infrastructure. More federally inspected packing and processing facilities, as well as enhanced refrigerated storage and transportation capabilities, are developing in many regions. However, the economic scale and degree of concentration of these facilities is likely to remain much smaller than in the United States. Mexico currently feeds ~1.5 million head annually in feedlots distributed across several smaller centers of feedlot production. This spatial distribution of cattle feeding is consistent with the current situation of several smaller packing plants rather than a few large packing plants. In Mexico, the internal efficiencies of large plants are quickly offset by higher assembly costs of fed cattle. Although new roads are improving transportation of both fed cattle and meat, Mexico is a very mountainous country and transportation is difficult and expensive. The feeding industry will continue to employ a wide variety of domestic feed and by-product resources and will utilize imported grains only to a limited degree, mostly seasonally and when grain market conditions are favorable. By-product feeds are proportionately more important in the Mexican cattle feeding industry than in the United States. The wide variety of by-product feeds used in Mexico includes citrus and sugar processing residuals, brewing and distilling by-products, leftover bread, tortillas, and tortilla chips. These provide an important and economical source of feed for the beef industry. Mexican cattle feeders make extensive use of molasses in feedlot rations.

Only in recent years has the Mexican beef industry utilized non-forage feed resources to any large degree. This means that the Mexican beef industry is relatively new to competing with other livestock industries for feed resources. Food demand in Mexico is growing rapidly, and in the face of significant limitations in arable land and water for crop production. Increased livestock production in recent years has meant more feed demand for poultry, pork, dairy, and beef production. The beef industry's use of concentrate feeds is relatively new, and the result is a very dynamic economic environment for Mexico's crop and livestock sectors.

### **Mexican Cattle and Beef Trade**

Mexico has exported calves to the United States for many years. The level of calf exports has increased recently, averaging just over one million head annually since the mid-1980s. Mexican imports of U.S. beef also have increased in the past few years. As a result, Mexico has become a net importer of cattle and beef overall and one of the United States' most important beef export customers. The United States dominated the Mexican imported beef market for many years, but Canada has been very successful at increasing its share of the Mexican market. Canada is likely to be an even larger exporter of beef to Mexico in coming years. There is the possibility that beef from Argentina or Brazil, the quality of which may actually fit the Mexican beef market more closely than U.S. or Canadian beef, could be a significant presence in the future.

Relative to the United States, Mexico historically has been a lower value market for both cattle and beef. However, in recent years, beef carcass values in central Mexico have averaged very close to U.S. market values. Despite this equalization of meat values, the nature of Mexican cattle production

systems makes calves worth relatively less because of the forage-intensive nature of Mexican beef production. The result is that even when carcass beef values are essentially equal in Mexican and U.S. markets, Mexican calves will tend to be worth more in the U.S. system where they can be redirected into intensive grain feeding. Mexico is therefore likely to keep exporting calves to the United States. However, there will be times when the domestic Mexican market will be relatively more attractive, and northern Mexican producers are beginning to pay more attention to domestic marketing possibilities while maintaining their focus on calf exports.

There are several dimensions to the dramatic increase in Mexican beef imports in recent years. First, Mexico has been deficit in total beef production. Rapidly growing domestic beef demand (due to increased population and per capita consumption), as well as drought and financially-induced herd liquidations, have created shortfalls in Mexican beef production relative to demand. Additionally, there has been an even larger shortage of fed beef due to the changes in Mexican consumer preferences for beef. Although U.S. fed beef is different than Mexican fed beef, it will substitute, especially when priced competitively.

Mexico is responding to the increased demand for grain-fed beef and reduced demand for grass-fed beef; however, needed changes in production systems will continue for many years. Producers, especially in the tropical and semitropical regions, are slowly developing different attitudes toward marketing feeder cattle to northern regions for feedlot finishing rather than grass finishing and direct marketing into urban centers. In some instances where producers have accepted the need for more intensive production systems there is a tendency to want to develop feedlot infrastructure locally rather than market cattle to other regions. Although the economic feasibility of some semi-intensive finishing systems (e.g., pasture based supplementation systems) have yet to be fully evaluated, cattle finishing in the tropical regions is unlikely to be viable. Tropical and semitropical regions have difficult environmental conditions and producers there would have to rely heavily on imported feed sources.

Another source of imported beef demand in Mexico relates to the issue of product mix. The Mexican beef market, like that of most countries, does not produce a set of beef products that exactly matches consumer preferences. Thus there are relative shortages of some parts of the carcass and relative surpluses of other parts. The joint product nature of beef production is a major driver of beef trade in Mexico, as it is in most major beef trading countries. Since Mexico is still a carcass-based market, there is relatively little differentiation of carcass primal and subprimal values. Thus, even when average beef carcass values in Mexico are equal to U.S. values, cuts that are lower valued in the U.S. market, such as chucks and rounds, may be very competitively priced relative to Mexican carcass values. The fact that carcass parts are more highly differentiated in value in the United States relative to Mexico has led to considerable misunderstanding. This situation contributed to the recent dumping charges brought against the United States after inexpensive U.S. chucks and rounds flooded the Mexican market. Some Mexican producers believed that low values of end meats was indicative of overall U.S. carcass values and must therefore constitute dumping because values were clearly less than production costs.

### **Summary**

In the long run, Mexico has considerable opportunity to increase self-sufficiency in beef production. However, Mexico continues to face difficulties in producing fed beef because of limited feed resources and growing competition between food and feed production in Mexican agriculture. Growing demand for fed beef in Mexico suggests opportunities for more development of cattle feeding in Mexico. However, viable feedlot production in Mexico involves a difficult balance of regional market integration, use of non-forage feed resources, and inevitable but minimal use of imported feed grains. Mexico is unlikely to develop large-scale feedlot and packing sectors like those in the United States and would not likely be competitive if it tried to do so. However, most Mexican feedlot operators began as meat companies and later entered into cattle feeding. These individuals have deep insight into the Mexican meat industry, and even though meat demand is evolving rapidly, have the ability to successfully

respond to changing market conditions. The subtle but significant differences in consumer preferences for Mexican fed beef as opposed to U.S. fed beef means that Mexican cattle feeders cannot and should not try to mimic U.S. production systems. On the whole, Mexican cattle feeders can be competitive only by recognizing the need to produce a less finished product in a less intensive production system.

There will continue to be considerable trade to improve beef product composition in both the U.S. and Mexican markets. Mexican preferences for Select products and end meats are highly complementary with U.S. preferences for Choice products and middle meats. This complementarity may make Mexico a strategically more important, albeit lower valued export market (per unit of product) than high valued export markets characterized by demand characteristics similar to those of the United States (e.g., Japan). Mexico has the potential to become an exporter of cow beef and some specialized high value products but is likely to remain a net importer of beef overall. Mexico will likely continue to exploit its comparative advantage in cow-calf production and export calves to the United States, while the United States will likely continue to exploit its comparative advantage in cattle feeding and meat processing and export meat to Mexico.

There is great opportunity for sustained long-term trade in Mexican cattle and beef in the global market. The United States has an obvious advantage in location but must develop and maintain Mexican markets against the inevitable competition from Canada and potential competition from South America.