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Machine Guns, Cows, and Quarantines: Foot and Mouth Disease in the United States, Mexico and Argentina

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Abstract

Although mad cow disease has reigned supreme as the most feared bovine malady for the last twenty years, foot and mouth disease (FMD) held that title for much of the twentieth century. Since the 1920s, it has been illegal to import fresh or frozen meat into the U.S. from countries where FMD exists. This sanitary embargo has been the source of cooperation and hostility in inter-American affairs. Some scholars consider the ban to be little more than protectionism, while others recognize the real biological threat. A cursory glance at the 1924 FMD outbreak in California reveals the high social and economic costs of an epidemic. The 1924 incident led to the later embargo which affected all Latin American nations. Mexico and the United States entered into a cooperative elimination campaign in the 1950s that successfully eradicated the disease south of the Rio Grande. Argentina vehemently protested the embargo and tried to soften its impact, but did little to eliminate FMD on the ground. It was not until the late 1990s that U.S. importers were able to trade in Argentine fresh and frozen meat. The case of FMD illustrates how the powerful undercurrents that surface in a moment of violence linger long after conflict subsides. Scholars have tended to focus on the political aspects of the FMD ban and neglected the biological realities of a highly contagious and virulent disease. A similar neglect of the biology resulted in a prolonged conflict between the U.S. and Argentina. In a mad cow world, with America now on the wrong side of meat embargoes, the cattle industry would do well to consider the value of cooperation and the futility of protest and denial.



In 1926, the U.S. Department of Agriculture banned the importation of fresh or frozen meat from any region in the world affected with foot-and-mouth disease (FMD). While on the surface this embargo did not discriminate between regions, certain countries felt the effects more strongly. Arguably, Argentina felt the greatest impact, in part due to the prominence of the cattle industry in that country's national image. Mexico was also subject to the ban, and the shared border with the United States raised the stakes of the embargo. Today, the specter of Mad Cow disease has eclipsed FMD in the popular imagination. In the last few decades, scholars have increasingly characterized the U.S. embargo as a politically motivated and unfair trade barrier.¹ In the pre-mad-cow era, scholars tended to treat the threat of FMD more seriously.² The conflicts over the U.S. embargo offer compelling evidence for the benefits of collective action.

Throughout the twentieth century, FMD has remained a serious menace to the livestock industry worldwide. Although there have been no outbreaks of the disease in the U.S. since 1930, maintaining that disease-free environment has been the exception world-wide. FMD is highly contagious and can survive in meat and other animal products for long periods of time at normal pH levels (proper cooking eliminates the virus). It infects cloven-hoofed animals, including cows, pigs, and sheep, in addition to several species of wildlife. As the name suggests, the disease causes soreness of the feet and mouth, and can result in the death of some animals, while leaving other animals sterile, weakened, and commercially worthless. Early in the twentieth century, scientists were beginning to realize that two strains of FMD existed. Today seven different serotypes are recognized. In 1999, an outbreak of the most recently discovered serotype in Asia resulted in cases of FMD in Japan (FMD free since 1908) and South Korea (free since 1934), eventually spreading to the Middle East and England in 2001.³

The earliest written record of the disease occurs in 1546 by an Italian monk. It has survived as a perennial threat to the cattle industry ever since. FMD arrived in Argentina during the 1860s or 1870s, carried by unknowing European immigrants. In 1906, the *Policía Sanitaria de los Animales* (Animal Sanitary Police) were authorized to

control the exotic disease, which was also known as aftosa in Latin America, but apparently made little headway. The U.S. suffered regular outbreaks of FMD starting in 1870 with reoccurrences in 1880, 1884, 1902, 1908, 1914, and two in 1924. In total, the federal and state governments spent \$20 million on eradication and slaughtered 320,000 cattle at a cost of \$150 million during these epidemics.⁴

Reaction to the 1924 FMD outbreak in California reached hysterical proportions, suggesting the depth of American fears. The disease was introduced to Mare Island Navy Yard in San Francisco in December of 1923 on ships from Asia. By spring, FMD had spread south to the Los Angeles area and cattlemen throughout the West were alarmed. Soon, thirty-six states imposed quarantines on a great variety of California animals and vegetable products including baby chicks, canned goods, manure, and bees. Hawaii embargoed all agricultural products except rice and required all human visitors to the islands to disinfect their shoes upon arrival. One state refused an order of railroad ties, another required a shipment of cement be delivered in disinfected railroad cars, even though the plant was 500 miles away from the nearest infection site.⁵

Arizona's reaction to the epidemic was the most extreme. Governor George W.P. Hunt adopted a quarantine so severe that even human movement across the border was suspended. Five points along the California-Arizona border were targeted, but the Yuma Wagon and Automobile Bridge was the scene of the greatest disturbance. In April, Governor Hunt received a telegram from President Calvin Coolidge requesting the relaxation of the quarantine. Hunt responded that he was unable to comply because FMD was continuing to spread in California. He telegraphed in reply that he was obligated to "business, banking, agricultural, stockraising and dairy interests... [who are] practically unanimous against any modification of [the] quarantine and the pressure on me is to make it even more stringent and apply it to passengers on railroad trains passing through the state.... Until [the] disease is under control in California, I feel it would be courting disaster to this state to modify [the] quarantine."⁶

In order to enforce his edict, Hunt called out the Arizona National Guard. The crowd of stranded travelers had grown into the

hundreds, with one estimate as high as 500 people, including women and children. The standoff escalated, and soon a Yuma fire-department pumper truck was at the bridge to maintain the cordon with a high-pressure stream of water. The National Guard arrived the next day, announcing their presence with short bursts of machine gun fire into the opposing riverbank. Finally, Dr. E.L. Stam, the Arizona veterinarian in charge of sanitation measures, set up decontamination stations. Automobiles were hosed down with formaldehyde and railroad passengers were required to walk through sawdust laced with formaldehyde. Although initially there was considerable resentment, the process became more orderly and tensions decreased. The National Guard went home on May 20, although the quarantine remained in effect until mid-August.⁷

It is easy to dismiss the actions of Gov. Hunt and others as hysteria, but the danger was real and the economic costs of FMD were high. In California, slaughtering of infected animals provided the control of the outbreak. Over 100,000 domestic animals, 22,000 deer, and countless smaller animals were slaughtered. The total cost was over \$6 million, with \$4.3 million shared between the federal and state government for compensation to the owners of slaughtered animals. The indirect costs are more difficult to estimate, but one study suggests that the epidemic resulted in a nine percent decline in overall business activity in the state. The agricultural sector was obviously affected, but shipping and tourism were also negatively impacted.⁸

During the administration of Franklin Delano Roosevelt, diplomatic overtures raised the possibility of relaxed embargo for Argentina. FDR inherited a long history of bad relations with Latin America in general and Argentina and in particular. In an effort to improve relations, Roosevelt's Secretary of State Cordell Hull negotiated an agreement with Argentine Ambassador Felipe Espil on the eve of Pan-American Commercial Congress held in Buenos Aires. The agreement adjusted the terms of the 1930 Tariff Act that mandated that any embargo be enacted at the country level. The new agreement would allow the application of a "rule of reason" whereby restrictions would be administered based on regional conditions. Under these conditions, an outbreak of FMD in Northern Argentina would

not eliminate the shipment of meat from Patagonia, for example. The agreement needed approval by the U.S. Senate to take effect.⁹

The debate in the Senate furthered the appearance of crass commercialism as an animating force behind the ban. The strongest pressure for the ratification of the Hull-Espil agreement came from a lobby group headed by foreign traders. They argued that the embargo was unfair, and the disease was not as prevalent as some alleged. Furthermore, they could see no reason to bar the entry of mutton from Patagonia, which was "as detached from Argentina as Alaska from the United States." In the end, the agreement failed to pass the Senate. It seems the power of the Western cattle interests exceeded that of the foreign trade block.¹⁰ Although both sides could be accused of playing politics, in light of the 1924 FMD epidemic in California, it is easy to see how the cattle interests (as well as other industries) could view any risk of FMD as too great.

Another Pan-American conference reopened the discussion on the FMD embargo. Argentine Foreign Minister Carlos Saaverda Lamas, on the eve of the Inter-American Conference for the Maintenance of Peace, stated his pleasure at FDR's re-election and his "Good Neighbor" policy. Saaverda Lamas hoped that the one remaining stumbling block to good relations, the "insistence of the United States on shutting out our meat by a sanitary regulation that holds that hoof and mouth disease is rampant in Argentina, when every one knows it is not." He invited U.S. experts to investigate conditions, and if such investigations did not occur, he would continue to believe the embargo was "unfair because unwarranted."¹¹

Although the extent of FMD in Argentina may not have been "rampant," its existence could not be denied. In the spring of 1934, an outbreak of FMD started in northern Argentina and Uruguay and rapidly spread to Buenos Aires province, the heart of the Argentine beef industry. As the 1936 talks appeared no closer to lessening U.S. restrictions, Argentine technicians and veterinarians began to call for actions within their country to quell the American fears. In October of 1937, the Argentine government announced that that movement of animals from areas infected with FMD would be strictly regulated. However, a decree does not provide a substitute for effective policy.¹²

An outbreak in Mexico highlights the challenges and costs of effective policy and the benefits of collective action. In October of 1946, a shipment of bulls from Brazil introduced FMD near Veracruz. Soon the epidemic spread and in late December the U.S./Mexican border was closed. By mid January of 1947, over 35,000 cattle in seventeen Mexican states were known to have the disease. On March 1, President Harry Truman signed a bill into law authorizing the Secretary of Agriculture to offer aid to protect vital U.S. interests. Seventeen days later, the two countries completed an agreement to establish the financial, procedural, and administrative ground rules for the *Comisión México-Americana para la Erradicación de la Fiebre Aftosa*.¹³

Under the commission, the responsibilities were shared equitably. The U.S. agreed to pay compensation for the slaughter of cattle (*ganado mayor*), and to provide most of the technicians and equipment. Mexico agreed to pay compensation for the slaughter of sheep, goats, and hogs (*ganado menor*), and to provide the laborers. Both sides supplied veterinarians, and the Mexican military was charged with enforcement. Although a plan was established, the eradication effort was no simple affair.

After a shaky beginning, the eradication of FMD in Mexico was finally completed in 1954. Initially, the campaign sputtered because of lack of funds to compensate ranchers for slaughtered animals. The slaughtering campaign was further slowed because of the strain it placed on the Mexican economy. This reality forced officials to change strategies from a strictly slaughter plan to one that included vaccinations. Other issues included the slow Mexican bureaucracy, lack of vaccines, and the scope of the problem. When an outbreak of another serotype of FMD occurred in 1949, the Aftosa commission responded quickly and efficaciously, proving it was finally equal to any challenge.¹⁴

The Mexican example provides several important insights into the U.S. FMD ban. First, it confirms that at the heart of the restriction is a concern for the spread of the disease. One can fault the U.S. for only extending aid when its interests were directly threatened, but the measures taken far exceeded any motivated by trade barriers and com-

modity protectionism. Second, it offers more evidence that the successful eradication of FMD is a lengthy and costly process. By 1950, the direct cost shouldered by the U.S. in the cooperative arrangement totaled \$120 million. If Argentina was going to export its meat to the U.S., it would have to do more than offer official protests.¹⁵

Following the success of the Mexican program, the U.S. took initial steps toward solving the problem of FMD in Argentina. In 1959, the "Operation Beef" program was announced. Three experts from Iowa State University traveled to Argentina to work with a six-person council of Argentine experts. The U.S. contributed a quarter million pesos to the joint operation aimed at developing year round pastures, improving calving rates by attacking FMD and undulate fever, and cattle feeding techniques. In early 1960, the U.S. agreed to loan Argentina over fourteen million dollars to help fight FMD.¹⁶

Argentina instituted some vaccination programs, in an effort to maintain its ties to Europe and in hopes of gaining access to U.S. markets for livestock from Tierra del Fuego. In 1960, over eighty percent of cattle in Buenos Aires province began to receive vaccinations. A few years later, the *Servicio de Luchas Sanitarias* (SELSA) was established to further the effort at FMD control. The organization had considerable authority and was largely autonomous. Despite extensive vaccination programs and limited slaughter operations, FMD continued to spread. By 1967, even the bastion of Tierra del Fuego experienced an outbreak of a serotype of FMD.¹⁷

Unfortunately, the efforts at eradication began in the 1960s faltered in succeeding decades. In 1969, Britain banned all Argentine beef except boned beef after a disastrous epidemic of FMD in the U.K. This wrought havoc on the Argentine cattle industry, as Britain was its primary customer. The Argentine government then placed a large land tax that impacted ranchers disproportionately. By 1974, the cattle industry was in a crisis. In the face of government price ceilings keeping beef prices low, nearly 40 percent of cattle sent to market were cows. This trend represented a lack of confidence among cattle producers and the decline of overall herd size. The combination of decreased exports and low domestic prices squelched any desire to invest in the industry, including the health of the herds.¹⁸

In addition to a lack of industry leadership, considerable political instability further damped the movement to control FMD. After years of Peronist and military rule, the cattle industry continued to languish. When the government of Raul Alfonsín resumed constitutional rule in the early 1980s, the economy was in terrible shape. In 1984, a brief ban on domestic sales of beef attempted to control rampant inflation and limit speculation on beef prices that had jumped thirty percent in the month of February. Under these conditions, little attention was given to the eradication of FMD.¹⁹

Despite considerable obstacles, at the end of the twentieth century Argentina was finally able to eradicate FMD. In a joint effort with Uruguay, in 1995 Argentina experienced a year without an FMD case. Two years later, the U.S. Department of Agriculture lifted its ban on imports of fresh meat from Argentina. After a brief outbreak brought on by cattle smuggled from Paraguay, the importation was halted for a time in 2000. This time, rather than deny the existence of FMD, the Argentine government halted exports on its own when the outbreak was discovered.²⁰

The embargo on Argentine beef ended with little fanfare. The lack of recognition is stunning in light of its long and contested history. It should be clear that the ban was rooted in concerns about the health of American cattle, although along the way Argentine beef was definitely used for political purposes by all parties involved. It seems that scholars who are quick to dismiss the sanitary aspects of the ban are focused on the political aspects (and not the biological issues), are sympathetic to the Argentinean perspective, or a combination of both. It is equally clear that the U.S. cattle interests preferred to keep any competitors out of the domestic market. However, the interests of the government and those of agriculture seldom coincide precisely, as suggested by Cordell Hull's experience.

The specter of cattle diseases continues to haunt the globe. FMD remains endemic in Africa, and as the 2001 outbreak in Britain shows, it can hardly been considered a bygone threat elsewhere. Mad-cow disease is the newest addition to a long line of maladies that infect livestock. It has the added danger of seriously menacing human health, jumping the species barrier as Creutzfeldt-Jakob

disease, which is potentially fatal. The history of foot and mouth disease suggests that agriculture can be fraught with conflict and that a cooperative, active solution brings better results than cordoning off a state or denying the existence of a problem. More importantly, the rapid spread of FMD provides convincing evidence that American security is best served by stable and effective governments across the globe.

Notes

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- 3 B.W.J. Mahy, "Introduction and History of Foot-and-Mouth Disease Virus," in *Foot-and-Mouth Disease Virus*, ed. B.W.J. Mahy (New York: Springer, 2005), v; Donald P. Spear, "California Besieged: The Foot-and-Mouth Epidemic of 1924," *Agricultural History* 56, no. 3 (July 1982): 530.
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- 5 Spear, "California Besieged," 534.
- 6 Quoted in Charles Kendall, "Arizona's War Against the Foot and Mouth Epidemic of 1924," *Journal of Arizona History* 14, no. 1 (1973): 48-49.
- 7 *Ibid.*, 48, 49, 52, 54, 55, 60.
- 8 Spear, "California Besieged," 537-39.
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- 10 "Traders Want Ban Lifted On Meat From Argentina," *New York Times*, 14 July 1935, 8(F); Peter H. Smith, *Politics and Beef in Argentina: Patterns of Conflict and Change* (New York: Columbia University Press, 1969), 121.
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- 13 Machado, *Aftosa*, 39-41.
- 14 *Ibid.*, 42, 51.
- 15 *Ibid.*, 58
- 16 Juan de Onis, "Point 4 Will Beef Up Argentina," *New York Times*, 4 August 1959, 34, 36; Machado, *Aftosa*, 72.

- 17 Machado, *Aftosa*, 78, 84-85.
- 18 Malcolm W. Browne, "Old-Time Riches Decline in Pampas," *New York Times*, 26 January 1970, 70; Jonathan Kandell, "Argentine Cattle Industry in Crisis," *New York Times*, 28 December 1974, 1, 2.
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