Reimagining the tropical beef frontier and the nation in early twentieth-century Colombia

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Trading Environments
Frontiers, Commercial Knowledge, and Environmental Transformation, 1750–1990

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On the eve of World War I, the future of global beef supplies appeared uncertain. The world’s largest exporter at the beginning of the century, the United States, had become a net importer. While Argentina’s success at replacing the United States in international markets was remarkable, people with an eye on the beef trade feared that the expansion of domestic consumption and agriculture on the Pampas would curtail further growth of exports.\(^1\) With North Atlantic demand continuing to rise, especially after the onset of war, there was an urgent need to develop new sources of supply. In this context, the possibilities of tropical ranching began to generate much interest.\(^2\) In 1914, noted author and editor of the *Boston Evening Transcript*, Joseph Edgar Chamberlin, reported on the bright prospects for raising cattle in Colombia. With “more cheap and unused grazing land than any other country in the world,” he noted, “Colombia alone could feed us [the multiplying millions of the United States] with beef for many years.”\(^3\)

Chamberlin was not alone in his prognostication that Colombia could become a major exporter. Numerous people with an interest in the beef trade, such as British expatriate E. Lloyd Owen, claimed that the Caribbean lowlands of Colombia “must be the great meat producing district of the future.”\(^4\) Intrigued, the British Board of Trade sent Robert Cunninghame Graham, the Scottish author and adventurer with extensive experience on the grasslands of Argentina and Venezuela, on a secret reconnaissance mission. His reports were highly favorable: the grass grew exuberantly, the cattle were well shaped, pests and diseases were limited, and recently introduced British beef breeds appeared to be doing well. “In my opinion,” asserted Cunninghame Graham, “the future of Colombia lies in cattle-raising.”\(^5\) All that was needed to develop Colombia into a commercial and globally integrated ranching frontier was a modern slaughterhouse. By then, meatpacking interests from Europe and the United States had begun exploring the possibility of establishing operations there. In 1918, the Colombian Products Company (CPC), a joint venture between Colombian ranchers and the International Products Company, won the concession to build and operate the country’s first ‘packing house,’ as it was called locally. The optimism
that Colombia could follow Argentina on the path to beef-led prosperity was palpable. The Minister of Agriculture and Commerce, Luis Montoya, predicted that, “with the establishment of the meat exporting business, the development of wealth in Colombia will be fabulous . . .”

Despite the bright prospects, integrating Colombia into North Atlantic beef markets was not self-evident. Because wiry, tropical cattle were considered inappropriate for northern palates, most internationally traded beef came from British breeds raised in temperate regions. Colombian cattle might have been favorably esteemed in Havana, but it was not clear how their meat would be received in London’s Smithfield market. Nor was the possibility of upgrading native herds by crossing them with British beef breeds a straightforward proposition given the difficulties of acclimatization. And while the exuberant growth of tropical grasses may have seemed fantastic, by the early twentieth century, doubt about the productive potential of the tropics was starting to spread. As early as 1908, Francisco de Villa complained that Colombia’s grasses were “rachitic and parched” and that much of its territory was “infertile.” By the early 1920s, Lucien Febvre, cofounder of the Annales School, denounced the “illusionary riches” of the tropics more generally.

In the end, the naysayers prevailed. The packing plant, which took three times longer than anticipated to build, never initiated operations. Unable to establish a profitable market for Colombian beef, the CPC decided to shutter the plant rather than export at a loss. Instead of turning Colombia into a second Argentina, the packing plant became a symbol of national failure, prompting reevaluations about the country’s tropical environment and the best method to develop its ranching potential and the nation as a whole.

This tale of hype and failure raises the issue of how resource frontiers in the tropics are imagined and constructed. A useful place to start is David Arnold’s notion of ‘Tropicality.’ This concept highlights the long-standing way that Europeans depicted the tropics as either a terrestrial paradise or living hell. Both sides of this Janus-faced discursive formation had the effect of highlighting the essential difference and deviance of such regions from a temperate norm, thereby justifying outside intervention. Various studies have shown how such ideas were central to Europe’s incorporation of distant lands. Not only did they color the perspectives of travelers, artists, scientists, and colonial officials, who in turn reshaped and reinforced them, but investors also fell under their influence. The concept of Tropicality, then, can also be of service in tracing the development of commercial knowledge and business ventures. Although doubts existed about the potential of the Colombian tropics to become an important beef exporter, in the context of impending scarcity and the fears of missing out on a valuable opportunity, the deep-rooted belief in tropical fecundity could be recycled into a narrative of commercial potential.

Nonetheless, while the concept of Tropicality originated as an effort to emphasize landscapes rather than just peoples or cultures in Europe’s
ordering of the nontemperate world, the particularities of tropical environments tend to be subsumed within the larger discursive formation. Discourses shape actions and have real implications, but it is equally important to avoid losing sight of the material and ecological underpinnings of history. In this case, I suggest that the failure of Colombia's first packinghouse was rooted in the tangible challenges of ranching in the tropics rather than simply the false expectations generated by a faith in tropical exuberance. The slow growth of native cattle, which made Colombian beef relatively expensive and of poor quality, along with the difficulty of introducing European breeds, undermined the country's competitiveness.

The failure of the packinghouse had the effect of inverting perceptions about Colombia's tropical environment and its potential to be a global beef producer. From faith in their natural fecundity, the tropics came to be seen as debilitating and unproductive. While this radical shift was consistent with Tropicality's dualistic vision, the actors who reimagined the Colombian tropics were primarily local. This case thus highlights the need to understand how the discourse operated domestically rather than simply framed European or American perceptions and domination. On the one hand, by defining the tropics as deviant from temperate standards, government officials and ranching modernizers highlighted their 'essential' difference. But similar to the way that Latin American elites understood racial qualities to be mutable rather than intrinsic, they also insisted that the tropics could be tempered. Backed by the authoritative power of modern science, officials and modernizers thus justified state interventions in an effort to transform the environment, ranching, and the nation. There was also a 'subversive' tinge to this discourse, since their portrayal of ranchers as backward and inefficient fanned critiques of the latifundio and encouraged Colombia's initial attempt at land reform in the 1930s. On the other hand, the reevaluation of the tropics generated a curious trans-species politics of race. Given the concern of many Colombian elites about the physical and moral inadequacy of the masses, they embarked on a concerted effort of racial revitalization. One strategy to reinvigorate the population was to raise domestic beef consumption. This required that ranchers produce more and cheaper beef, which, in turn, depended on their ability to domesticate the tropics and import European breeds. 'Whitening' Colombia's cattle, therefore, was a means to 'whiten' the nation. Ranchers, however, were more interested in crossing their animals with zebu, which symbolized, for modernizing boosters, acquiescence to Colombia's tropical environment and the maintenance of outdated ranching practices. The product of a region even more diseased and debilitating than Colombia's, zebu not only threatened the country's cattle herd but the nation itself and needed to be banned. Although the prohibition lasted less than a decade, from 1931 to 1939, it demonstrates the commingling of Tropicality, eugenics, and veterinary science.
THE ‘PACKING HOUSE’ AT COVEÑAS

Plans to build a meat packing plant in Colombia grew out of a confluence of global and local interests. Officials from North Atlantic economies worried about rising pressure on internationally traded cattle stocks. As beef consumption in Europe rose, and the United States entered global markets as a competing importer, the ability of Argentina or Australia to significantly increase their exports seemed doubtful. Furthermore, because of wartime demand and destruction, Lord Harcourt, president of Britain’s Board of Trade, predicted that “After the war there will be a general scarcity of meat—almost a war famine.” Britain was particularly vulnerable since 40 percent of its consumption consisted of imports. To secure a steady stream of beef, Harcourt looked for new sources of supply, dispatching Cunninghame Graham to Colombia. By then, numerous meatpacking interests were also examining Colombia’s potential.

In Colombia, the prospect of future scarcity was embraced with alacrity. “For many years so favorable an opportunity will not present itself again,” wrote Luis Montoya. Yet the idea of establishing a beef export industry also promised to resolve a number of pressing domestic problems. From the mid-nineteenth century, Colombian economic growth was punctuated by a series of tropical commodity booms and busts. The latest was coffee, whose long-term prospects at the beginning of the twentieth century were still far from certain. There was an urgency to find a stable export commodity and, to many, cattle seemed to be the most promising. Since beef was an ‘indispensable’ food, reasoned a congressional commission, its consumption would only increase over time, “something that does not happen with coffee.” A meatpacking plant also promised to resolve a looming crisis in the country’s most important cattle-raising district, the plains of the Caribbean coast. Manuel Dávila Flórez, senator from the Caribbean department of Bolívar, argued that despite the export of about half a million animals to Cuba between 1898 and 1906 (to help restock the island following the Spanish American War), local herds rebounded quickly on the region’s extremely fertile soil and abundant grasses, causing prices to fall and the industry to stagnate. Furthermore, most everyone agreed that Colombia had large extensions of undeveloped land that was good for raising cattle and that was within easy reach of Caribbean ports. If only an export outlet could be found, the cattle population of the Caribbean plains could easily increase from one to five or even ten million head, and Colombia could duplicate Argentina’s beef-led prosperity. Yet given the restrictions on exporting live animals to the United States and Europe, the only way to access those markets was by shipping frozen or chilled carcasses.

The Colombian government, therefore, passed a series of laws designed to attract the capital and expertise required to build a meatpacking plant. The final version offered a subsidy of £10,000 per year for ten years to the
first company that constructed a plant on the Caribbean coast within two years of winning the concession. The plant had to be modern and capable of processing 50,000 cattle per year and converting the waste to commercial products like fertilizer. Additionally, the meat it produced could only be exported, and the company was required to provide £150,000 worth of long-term, low-interest loans (for five years at 9 percent annually) to ranchers in the region. It promulgated the offer around the United States and Europe and three groups submitted bids by the 1918 deadline: one led by English Liberal politician, Sir Robert Perks, who served as the front man for Poels and Brewster, beef importers at Smithfield market; the Compañía Agraria del Caribe, composed of prominent estate and cattle owners from the Colombian interior; and the Colombian Products Company, a joint venture between four ranching operations from the Caribbean coast and the US-based International Products Company, with large-scale cattle and forest interests in Paraguay.18

Despite the lingering anti-Americanism over the loss of Panama, the CPC won the concession. Backed by foreign capital already in the meatpacking business and by prominent ranchers from the Caribbean coast, the government thought that the CPC had more organizational capacity than the Colombian-owned Compañía Agraria del Caribe.19 The CPC also promised to complete construction within two years, a timeline that Perks was unwilling to commit to, given the wartime restrictions on the export of capital from the United Kingdom. Additionally, the CPC offered to build a plant with twice the required capacity and volunteered to match any offers to accept fewer subsidies, which the Perks group had reduced from a total of £100,000 to £30,000. The company declared that it would build its plant at Coveñas, on the southern edge of the Gulf of Morrosquilla and about 110 kilometers southwest of Cartagena.

Construction problems plagued the CPC from the start. Although it intended to begin construction one month after signing a contract with the Colombian government, wartime constraints on the export of capital and materials from the United States prevented the CPC from breaking ground for over a year. The company then ran into shipping delays because of labor struggles in the United States and had trouble recruiting workers in Colombia. The delays forced the CPC to request extensions from the Colombian government.20 There was pressure within Colombia to declare the contract void, but other than the forfeiture of a bond equivalent to about US$5,000, the government had not made provisions for noncompliance. Because it could not retroactively collect customs duties on imported construction materials and machinery, and it would lose the power to oblige the CPC to export all of its product and to make long-term, low-interest loans to local ranchers, the government felt compelled to grant the extensions.21 It was not until December 1923 that the company’s American engineers and some seven hundred workers finally finished building a modern meatpacking facility with the capacity to slaughter 9,000 cattle per month, cold storage for 6,000 carcasses, and a 1,900-foot wharf complete with railway line.22
Despite completing the plant, the CPC did not begin operations in 1924. A year later, ‘reliable sources’ told Lester Schnare, the US consul in Cartagena, that the company would start producing frozen carcasses in July. The following year, Schnare’s ‘best available sources’ indicated a probable start date in September 1926. September came and went, and the slaughterhouse remained silent. The plant’s archival trail then peters out, presumably as its supporters admitted that it was a lost cause. By 1938, at the end of its 20-year contract, the CPC was finally dissolved. For some years, the company had shipped live cattle to Mexico and Peru, but it never exported beef carcasses.

Various theories circulated to explain the failure. The CPC initially blamed the construction delays. Others also noted the closure of the US market by protectionist tariffs in 1922. Some Colombians even suggested that it was a conniving plan by the International Products Company to prevent Colombian cattle from competing against their Paraguayan operation. The immediate cause, however, was the global market situation: beef prices collapsed because of the postwar depression (1920–1921) and the projected supply shortfalls never materialized, partly because Argentine beef exports, by far the world’s largest, kept growing. But the fundamental problem was that Colombian carcasses were not competitive on the international market. When the plant was ready to operate, the CPC sent samples to buyers around Europe. English importers graded them poorly, the equivalent to second-class frozen carcasses from Australia; neither they nor the Germans expressed much interest. The Italians, who could not afford to be so discerning, offered to buy five hundred tons monthly. But the price they offered, the equivalent of about $32 pesos per steer, would have caused the CPC to lose money. Meanwhile, Fernando Velez, the company’s president, noted that the CPC could sell live animals in Mexico and Peru for $40 pesos per head. And ranchers who fattened cattle in Bolívar were getting up to $46 pesos for their cattle in the Medellín (Antioquia) market. So long as ‘second-class’ cattle sold for 8¢ per kilogram in Colombia, compared to 6.8¢ per kilogram for the best Creole-European crosses in Argentina and Uruguay, Velez said, “it is obvious that the packing-house cannot start operating yet.”

Two interrelated problems undermined the competitiveness of Colombian beef: breed and age. Colombian cattle were descendants of the original stock brought to the country by the Spanish at the beginning of the colonial period. Cunninghame Graham remarked that, for range cattle, they fattened relatively well and yielded a good proportion of meat. For these reasons, Cuban buyers at the turn of the century paid a small premium for Colombian cattle over Mexican and Central American animals. But they were still Creole range cattle, with lean, stringy meat and heavy on the less valuable cuts from the forequarters. That their meat was inferior in both quality and yield to the European breeds or even the Creole-European crosses raised in Argentina was primarily due to genetics. English breeders had created animals that produced tender meat interlaced with fat deposits.
and had proportionally larger hindquarters, where the most valuable cuts are located. They also dramatically lowered the time it took these breeds to reach maturity, both increasing the productivity of meat production and creating more tender and more valuable beef. In 1924, Lester Schnare noted that in Argentina, with their English breeds and alfalfa pastures, “a grower can produce in the same length of time thrice the quantity of beef, sell it at a lower price per pound, and realize more than double the amount of money, as compared to a grower in this district.”

Although he expected European markets to improve in the future, it does not appear possible that the cattle rearing industry can be of constant and permanent value to Colombia or become a competitor in the world’s markets for packed meats and live cattle until radical changes shall have been made in the care and treatment of cattle and the herds shall have been greatly improved by large importations of blooded cattle and careful breeding.

The radical transformation that Schnare envisioned never came, although a very different one, based on the diffusion of zebu blood, had already begun. In fact, instead of becoming a prominent beef exporter just the opposite occurred. By 1926, rising domestic demand turned Colombia into an importer of thin cattle from the llanos or plains of Venezuela. The CPC foundered on misplaced expectations common to the development of resource frontiers: that local demand was negligible and that global scarcity alone would ensure their success.

IMAGES AND REALITIES OF TROPICAL RANCHING

Given the spectacular failure of the CPC, as well as Colombian ranchers to satisfy even domestic demand by the mid-1920s, what accounts for the prior optimism? Why did so many people believe that Colombia could duplicate Argentina’s success as the world’s largest beef exporter? The answer, I suggest, lies in the way inherited ideas of tropical fecundity fused with a speculative urgency.

From Europeans’ early encounters, the trope of earthly paradise has shaped their image and understanding of the region that they later defined as the tropics. Bathed by the sun and perpetual warmth, blessed with exuberant and varied vegetation, these were lovely and sweet-smelling lands, similar, no doubt, to the Garden of Eden. Nature was benevolent there: crops grew effortlessly, fruit ripened year round, and one’s few wants were easily satisfied. By the eighteenth century, “a full-fledged myth of tropical exuberance’ had become established in Europe.” A key figure in the construction and propagation of this image, especially for Latin America, was Alexander von Humboldt. His assessment of the natural abundance and
surprisingly fertile soils of the tropics indicated their potential value. The wave of British investment in Latin America following the Wars of Independence was predicated on the belief that, by removing the shackles of Spanish colonialism, the natural riches of the region could be turned into a source of tremendous wealth. The economic boom never came, leaving much of the continent mired in debt, but the expectations did not die down. The fervor of mid-century liberalism was driven by similar ideas, only now couched more in the language of comparative advantage. They also became integrated into foundational myths, promulgating a streak of optimism about latent national destiny.\textsuperscript{35}

In Colombia, the postcolonial economy finally started to revive in the late-1840s as the country found North Atlantic markets for a series of (quasi) tropical commodities. These export booms, however brief, served to reorient the interest of many Colombian elites from staid professional activities in the old colonial centers to the potential riches that were possible by exporting tropical commodities. Given that many of these elites had to leave the comforts of the capital and brave the primitive conditions and adversities of the lowlands, they stressed their own heroic efforts to make a tropical wasteland productive.\textsuperscript{36} Such views parallel long-standing European perceptions of the tropics as inhospitable and disease-ridden. As David Arnold notes, “Whether naturalists found the forests of Amazonia grand or gloomy, they understood them to be an obstacle to progress and the advance of civilization.”\textsuperscript{37} To unlock their riches, both Europeans and Colombian elites emphasized the need to domesticate the environment, deploy the emerging field of tropical medicine to render it safe, and maintain their own moral fiber in face of the threat of degeneration. These challenges, however, did not undermine the persistent belief in the country’s unrivaled fertility.

This inherited faith in the natural exuberance of the tropics generated much of the optimism that Colombia could become a prominent beef exporter. Discussions about the packinghouse project repeatedly refer to the fertility of the country’s soils and its rich forage base. Cunninghame Graham described the vegetation of the coastal plains as ‘very luxuriant’ with guinea and para grasses quickly growing over two and four feet respectively.\textsuperscript{38} “This is quite one of the finest cattle countries in the world,” he wrote, “and it would be a sin to lose such an opportunity.”\textsuperscript{39} Utah rancher Lester Magnum was convinced that the extensive property he managed south of Mompós could be made into the most productive cattle operation in the world.\textsuperscript{40} Lloyd Owen suggested that the millions of acres of ‘splendidly watered’ savannahs gently rising to the foothills of the Andes were just waiting for an export outlet to fill with cattle.\textsuperscript{41} Dávila Flórez claimed that the ‘very fertile’ soils, on which new pastures of ‘superior quality grasses’ could easily be established, would allow the regional herd to grow five-fold without exhausting the productive base.\textsuperscript{42} Luis Montoya extolled “that nature herself has indicated the cattle industry, for the quality of the land, the abundance of water, the environmental conditions, to be at the center
of our economic upsurge.” M. T. Dawe, British agricultural advisor to the Colombian government, concurred: “If half of what I’ve been told regarding the resources and facilities to raise cattle on the Coast is true, Colombia is destined to be a second Argentina.”

This optimism was also generated by investor anticipation and anxiety, both typical of the speculative mentality associated with the development of resource frontiers. The reports highlighting Colombia’s cheap rangeland, prolific grasses, and promising environment were remarkably vague and anecdotal given the substantial sums to be invested. While they constructed the image of valuable resources waiting to be tapped, it was also the expectation of future scarcity and knowledge of prior beef fortunes that made for a compelling story. The wealth generated running cattle on the free grass of the Western United States following the Civil War, the economic might of Chicago’s Big Four, and the sensational rise of Argentina’s beef exports intensified the sense of urgency: get in before prices rose and the best lands were taken. Doubts about whether the cattle population of the Caribbean region was large enough to support the packing plant were easily dismissed. And Cunninghame Graham’s comment that Colombian beef was “good and juicy” seemed to satisfy the concern of the Perks group about its quality and eventual market price.

Contrary to the frequent emphasis on northern perceptions of the tropics, much of the optimism about Colombia’s ranching potential was generated locally. There has been some effort to correct this Eurocentric bias within the notion of Tropicality by incorporating subaltern voices, although the shift sometimes just casts local actors in supporting roles, missing both the way such discourses circulate within tropical regions and how people from the tropics helped shape northern impressions. European views, particularly those advanced by Humboldt, encouraged Colombians to imagine the unlocked potential of their tropical environment. But later, as Europeans and Americans began investigating the possibilities of raising cattle for export in Colombia, local perceptions and faith in tropical fecundity influenced their assessments. Although Cunninghame Graham spent a couple of months in Colombia, he gleaned much of what he reported by talking to local ranchers. While he could speak directly to the quality of Colombian beef or the calm disposition of the cattle, he could judge the prospects and challenges of cattle raising primarily from the information that ranchers provided him. M. T. Dawe was even more explicit when he qualified his prediction that Colombia could become a second Argentina on the veracity of what he had been told. In turn, however, the statements of foreign experts served to reconfirm local views and hopes. At times this circuit of recycled images appears to have been consciously manipulated. For example, it is likely that newspaper editor Joseph E. Chamberlin received information about the favorable outlook for raising cattle in Colombia from the Colombian Information Bureau, a New York office set up by the Colombian government to promote commercial ties. The Bureau then quoted Chamberlin
in an article that it published to generate foreign interest and investment in Colombian ranching.\(^48\)

Whatever its origin, supporter's faith in the productive potential of Colombia's coastal plains ran headlong into the challenging realities of tropical ranching. While Colombia's Caribbean coast has decent alluvial soils, contra Lloyd Owen and Dawe, there were not millions of acres of prime savanna land just waiting to be grazed. Most of the unused land was covered by forest, which first had to be cleared and planted in pasture. While undeveloped land could be acquired relatively cheaply, it cost a good deal to make it productive. And although the grasses did grow quickly in the tropical conditions, this was a problem as much as a blessing. Their prolific growth helped ranchers conquer the forest, but it also caused their protein content to decline quickly. This was exacerbated by the predominance of large, continuously grazed pastures and a mistaken belief that favored forage quantity over quality. Thus, while some of the difficulties of ranching in the tropics were self-imposed, tropical grasses tend to be less nutritious than their temperate counterparts.\(^49\)

Furthermore, the limits to Colombia's competitiveness had more to do with its cattle than its forage base. The European breeds on which the Argentine industry was based fared poorly in the tropical conditions of the Colombian lowlands. Disease, pests, and parasites represented an important obstacle. Range management did not help matters either. But a primary obstacle was simply the heat of Colombia's coastal plains where daytime temperatures average about 32 degrees Celsius year round and do not drop significantly at night. Such heat levels are a problem for most European breeds, which have a solid layer of subcutaneous fat that helps keep them warm through cold winters but causes them to overheat in the tropics. By contrast, this layer of fat is discontinuous in Creole cattle, facilitating the escape of body heat; and zebu lay on fat between their muscles rather than under the skin. Improved European breeds were also bred to digest forage efficiently. In the tropics, however, their high metabolism rate is a disadvantage since it increases their internal body temperature, especially given the coarse quality of tropical grasses. To compensate, they not only seek shade and reduce their movements but also eat less. As a result, European cattle in the tropics tend to grow more slowly and breed less frequently than in temperate regions. Heat-suppressed appetites lower their resistance to disease and parasites, which is further exacerbated by their comparatively thin hides. And they tend to acquire larger heads, thicker necks, and stunted loins and rumps after several generations. In other words, in the hot tropics, European breeds lose many of the qualities for which they were originally bred and introduced. Colombians were not the only ones who experienced such problems: North American and European ranchers did no better in Colombia or elsewhere in the tropics. "That many types of livestock originating in the Northern Hemisphere do not thrive in tropical and subtropical environments can no longer be denied," concluded South African cattle expert Jan Bonsma in 1955.\(^50\)
Colombian ranchers did introduce some European cattle, but the scale of such imports paled in comparison to those of Argentina. By 1895, close to one third of the cattle on its Pampas region were European breeds or crosses, and in the early 1920s, Argentine ranchers imported up to 150,000 pure-breds from the United States and Europe annually. By contrast, Colombian ranchers imported less than one hundred purebred cattle per year during the 1920s, and over half of these were dairy breeds destined for the highlands. As a result, they had to rely on autochthonous breeds that, though well adapted to the rigors of the tropics, grew and multiplied slowly. Reaching maturity at four to five years, their meat was already too tough for better European markets. And the slow turnover of capital—in both animal and grass—raised production costs despite the seemingly cheap land. While it took Colombian ranchers about five years to produce a steer that yielded 250 kilograms of meat, their Argentine counterparts could raise a steer in two-and-a-half years that yielded 340 kilograms of better quality beef. The CPC was thus squeezed between the relatively high cost of Colombian cattle and the relatively low quality of its beef.

REIMAGINING TROPICAL RANCHING

In the wake of the packing plant fiasco, disillusionment with the country’s tropical environment set in. The rich forage base that boosters once emphasized withered into nutritionally deficient grasses. “[O]ne of the obstacles to the improvement of ranching in these [tropical lowlands] is the poor and unvaried food,” remarked the head of the National Livestock Department in 1930. Similarly, the natural fertility of the soil became eclipsed by its mineral deficiencies. Instead of the ‘unimprovable quality’ of native breeds, as noted by a congressional commission in 1915, officials complained about their ‘inferior characteristics,’ “the outcome of the feed and environmental conditions.” Manuel Gómez Rueda, head of the National Livestock Department, warned that “the heat, humidity, lack of seasons... and other tropical characteristics make our environment very favorable for the development of a great variety of parasitisms... which [if they] don’t always immediately kill the organism [cattle]... they do annihilate its development.” Whereas many people believed that livestock diseases were of minor importance through the early-1920s, by the following decade they threatened to “ruin the livestock industry.” Rather than a source of comparative advantage, government officials had to admit that “ranching in tropical regions is difficult due to the inherent environmental conditions.”

Government officials and industry boosters, however, believed that it was possible to transform the environment by adopting modern management practices. Although little was known about tropical ranching at the time, they scoured foreign livestock journals and initiated research on local conditions as the basis of their recommendations. To counteract the
soil deficiencies, they promoted the use of mineralized salts. To improve diets, they encouraged ranchers to grow a variety of grasses and to propagate, rather than remove, the spontaneously growing legumes in their pastures. To combat pests and disease, the government began subsidizing the construction of tick-dipping ranks and requiring that cattle be vaccinated against a number of diseases. Officials extolled the virtues of “technical and scientific care and management” through government publications, radio shows, and state veterinarians. While such practices promised to raise productivity levels, they were also said to minimize the environmental hurdles to importing European breeds, which the government had begun to subsidize. Only by upgrading the cattle population, officials argued, could Colombia become a prominent beef exporter. But even just attending to the rapidly growing home market required domesticating the tropics through the application of the latest scientific principles.

By promoting scientific authority at the cost of traditional knowledge and local autonomy, these recommendations form part of a much broader tendency in the history of efforts to develop the tropics. In this case, however, modernizers directed their contempt at one of the country’s most powerful groups. “The transformation of the environment,” complained Washington Bernal, “depends on the preparation of the human element, and among us this makes it very difficult, especially in the lowlands.” Annoyed at the slow pace of progress, government officials blamed ranchers for failing to adopt their suggestions: most cattle estates still lacked orderly management plans, the pastures remained impoverished, and cattle fended for themselves. Ranchers were also said to ignore the “laws of diet, inheritance, zootechny and the environment,” and only halfheartedly participated in the government’s pest and disease eradication campaigns. Not only do we have to deal with “the prejudices of the masses,” complained Guillermo Londoño, Minister of Agriculture and Commerce, but we also have to struggle “against the inexplicable resistance of landowners of the most elevated social position, [yet] no less reticent to scientific initiatives.” Instead of improving, the cattle industry remained mired in “backwardness and routine.”

In their frustration, officials began to associate ranching with nature and extraction more than with labor and production. They described ranchers as ‘empirical’ rather than scientific or progressive, and derided them for relying on nature’s bounty rather than attempting to transform their tropical environment. “Ranchers simply use cattle to take advantage of natural grasslands,” despaired Manuel Gómez Rueda. “The bull works alone and then the ranchers round up the offspring, count, brand, and capitalize the result.” They likened ranchers to nature-based rentiers in a world where the new mantra had become “produce more cheaply.” For this reason, Raúl Varela, director of the Division of Rural Economy in the Ministry of Agriculture, lamented the lack of “real ranchers or real ranching.” While critiques of ranching were not entirely new, they gathered force in the wake of the packing plant fiasco.
The image of retrograde ranchers also fed into the growing critique of the _latifundio_ in Colombia. This also has old roots that gathered momentum in the 1920s and '30s. By then, the conflicts over the settlement of the agrarian frontier had intensified. Many municipalities reported that cattle ranchers often occupied all or most of their public lands. And laws designed to protect peasant settlers, such as granting them squatting rights and excluding their holdings from subsequent adjudications, were often flaunted in practice. To make matters worse, the requirement that frontier lands be made productive in order to establish property rights, generally by converting forest to pasture, was only marginally successful, as many large cattle estates remained only partially developed. As peasants clamored for access to land, as the state lost control of its agrarian frontier, and as rising domestic demand forced up food prices, the problem of the _latifundio_ acquired greater significance. Social critic, Alejandro López, identified ranching as the source of many of the country’s problems. Raising cattle, he argued, was socially unproductive: low labor demands failed to generate employment and stymied regional development, which depended on a denser population and a more equitable land tenure structure. Critiques of this sort spurred the Minister of Industries to defend ranching from this ‘national hyperesthesia.’ While cattle ranches monopolized large parts of the countryside, he wrote, “it is an absolute error to believe, as some have been preaching, that ranching, instead of a source of wealth, is a cause of impoverishment.” But in the early 1930s, momentum was temporarily against ranchers and other landed elites as President López Pumarejo, however timidly, pushed through the country’s first attempt at land reform.

**RACE AND NATION**

The reevaluation of the tropics and Colombia’s ranching potential also intersected with concern for the future of the nation. Like their counterparts throughout Latin America, Colombian elites worried about the country’s racial makeup. They imagined that the predominantly indigenous, black, and racially mixed roots of the masses that formed the bulk of the population were decidedly inferior. What’s more, many also believed, like psychologist Miguel Jiménez López, that “all the races that comprise our current population were once superior to what they are today.” Signs of this racial degeneration included small stature, cranial deformations, physical weakness, reproductive abnormalities, sickness, imbecility, and childish tempers. How could they hope to build a strong, modern nation state with such a weak and ignorant population? “With racial mediocrity,” and “biological forces barely sufficient to vegetate,” lamented Laurentino Muñoz in *The Biological Tragedy of the Colombian People*, “we will never achieve prosperity or civilization.”
Yet Colombian elites tended to reject the scientific discourses emanating from the United States and Europe that essentialized racial characteristics and defined a country's potential in terms of the genetic composition of its people or, for that matter, its environmental conditions. Abiding by such theories meant that the path to progress was effectively closed, because local populations were not up to the task. Unable to face such dismal prospects, and steeped in the Lamarckian tradition, Colombian elites held out for the possibility of racial transformation.

There were three main avenues through which elites hoped to improve the racial character of the masses and set the nation on the path toward modernity. The first was by crossbreeding. “The radical cure for our decadence,” wrote Jiménez López, is “a good and large [wave of] immigration.” By good he meant white, preferably from Northern Europe. Not only would they bring skills and strong work habits but, contrary to European fears that racial mixing necessarily led to degeneration, many Colombian elites believed that white blood was inherently dominant and that miscegenation would lead to a ‘whitening’ of the citizenry. The second strategy was to cleanse the environment of degenerating and debilitating influences. Acclimatization debates demonstrated that Europeans and Americans could not flourish in the tropics: They too suffered from the heat, parasites, diseases, and low morality. Therefore, environmental rather than just racial characteristics were part of the problem. One solution to the poor health, vitality, and behavior of the Colombian people was to promote hygienic conditions and practices. “To govern is to sanitize,” affirmed future president, Mariano Ospina Pérez. The third path was dietary improvement. The “deficient diet of our working class,” wrote Pablo García, “should lead us to reflect on the dire consequences that this has not only on the individual and collective health but on the future of the race.” Protein intake appeared particularly deficient, so increasing it was a direct way to invigorate the masses. While Mexican elites encouraged the masses to consume wheat rather than corn because they assumed it contained more protein, in Colombia experts promoted the consumption of meat, especially beef. For instance, Carlos Michelsen, author of the first Colombian text on nutrition, claimed that “the size, power, strength, and morality of well-managed nations develop in direct proportion to the consumption of beef.” Within Colombia, García compared the “weak, anemic, and lazy” highlanders, who ate little meat, to the virility of the llaneros or inhabitants of the Eastern plains, who consumed lots of beef.

The Beef Question was therefore not just about establishing an export industry; it also addressed the issue of insufficient domestic consumption. The problem was that much of the population could afford to eat meat only occasionally. To encourage beef consumption, the government tried to increase cattle stocks by periodically banning the slaughter of reproductive-age cows. More important were its efforts to improve the productivity of ranching. Ranchers, it argued, needed to produce more and
cheaper beef, and the most promising strategy was to ‘sanitize’ the tropical environment, making it safe for the introduction of fast-maturing European breeds. In other words, the future of the nation depended, to a significant degree, on the ‘racial’ composition of its cattle.

The problem was that most ranchers were more interested in crossing their animals with zebu rather than European breeds. Over the years, a number of ranchers attempted to upgrade their herds with European animals, but, outside of the highlands, the results were generally disheartening: They required an inordinate amount of care, performed poorly or died, and did little for the long-term improvement of Colombian cattle. By contrast, ranchers were enthusiastic about the results of crossbreeding with zebu. Given its origins on the Indian subcontinent, the zebu is well adapted to tropical environments and poor forage. A wide range of physiological adaptations—from lower basal temperatures and metabolic rates to various properties of its skin and cells—help it avoid overheating under the tropical sun. A thick hide, which it can shake vigorously, helps it resist pests and the transmission of insect-borne diseases. Furthermore, because the zebu (Bos indicus) is a different species from Colombia’s ‘native’ cattle (Bos taurus), crossing the two took advantage of heterostasis, or hybrid vigor, in which the offspring tend to grow faster and larger than their parents.

Colombian ranchers were fairly quick to recognize the advantage of upgrading their herds with zebu. The Eder family imported the first zebu bull in 1901 for its Cauca Valley sugar plantation. In line with the initial global diffusion of zebu to Jamaican or South African sugar plantations and Brazilian coffee estates, their main interest was producing strong draft animals. It was only in 1914, however, that a second zebu bull was imported with an eye to improving Colombia’s beef cattle. The previous efforts of Adolfo Held, the German merchant-turned-rancher, to improve his cattle by introducing European beef breeds had failed. So he asked the Hamburg commercial house of Carl Hagenbeck, the dealer in exotic animals to Europe’s zoos and circuses, for advice. Hagenbeck recommended the zebu, which had worked well for the French in Algeria. The results proved promising and Held later imported more zebu bulls, and a few cows, from Texas, Brazil, and even India. Other ranchers, following the success of Held and colonial breeding programs in the Caribbean, also began to import zebu from Jamaica and Trinidad. But despite these connections between Colombia and European or colonial circuits of knowledge production and animal distribution, it was in fact Brazil that quickly became the most important zebu breeder and booster outside of Asia. Between 1890 and 1921, Brazilian ranchers imported over five thousand zebu cattle; and by the late 1930s, there are estimates that half the national herd, some 22 million head, was composed of zebu crosses. Colombian imports of zebu cattle were on a much smaller scale, but the popularity of their offspring nonetheless spread rapidly among lowland ranchers. By 1938, veterinarian Carlos Alberto Rojas noted that “All the ranchers of the hot and temperate lands [below
2000 meters] show themselves to be partisan to the zebu breed, and have dedicated themselves to breeding and rebreeding it, obtaining a mixture that almost never goes above ½ zebu blood.”

The diffusion of zebu was anathema to ranching modernizers. Some of their concerns were practical. Following European and American critics, they warned that zebu meat was tough and insipid. If Colombian ranchers retained any hope of breaking into European markets, then they needed to avoid the zebu at all costs. In addition to being difficult to handle and poorly shaped, the zebu was said to grow slowly, a poor choice for a nation looking to lower the cost of beef production. Zebu cows also produced little milk, which discouraged people who had begun to envision the dairy industry as a cheap, alternative source of protein. Furthermore, officials feared that zebu would prove a vector for the introduction of cattle diseases. Precedents elsewhere had them on alert: In 1906, zebu imported from India to the United States were found to have surra; and in 1921, Brazil banned further imports of zebu (until 1930) following the introduction of rinderpest. Given the weakness of the Colombian state, and “the still deficient livestock sanitary stations,” explained Fidel Ochoa, head of the National Livestock Department, “what hope do we have left” other than outright prohibition? Following an outbreak of trypanosomiasis in 1931, which was traced back to the importation of cattle, including a number of zebu, from Venezuela, the government banned further imports of zebu into Colombia.

But much of the concern about the zebu appears to have been more ideological than practical. For instance, it was not clear whether it was zebu or criollo cattle that arrived infected from Venezuela. By contrast, the introduction of brucellosis along with European dairy cows did not generate campaigns to ban the importation of European breeds. While the admirable qualities of a Hereford or Angus represented a shining beacon of modernity and human prowess, critics thought that the zebu was shaped by nature rather than by people. Antonio Zapata called it a “wild animal,” emphasizing its otherness with respect to domesticated cattle. Its Indian origin—even more tropical than Colombia—elicited fears of dangerous, exotic diseases and degenerating influences. As with human immigrants, there was concern about the wrong kind of miscegenation. Because zebu attributes were thought to dominate, crossbreeding threatened to eliminate any admirable traits that native breeds might possess. European blood could improve Colombian cattle, but the zebu’s would cause them to degenerate.

Furthermore, the relatively rapid diffusion of the zebu was symptomatic of the backwardness of Colombian ranching. To veterinarians and government officials, ranchers preferred zebu because changing the animal to fit the environment was easier than transforming the environment or their own ranching practices. While modernizing boosters were well aware that European breeds needed more care, that was partly the point. Successfully introducing specialized beef breeds required ranchers to combat ticks and pests through chemical dipping and pasture rotation, to drain swampy land
and provide access to clean water, to improve their forage base, rationalize pasture management, use supplemental feed, and provide more attentive care. In other words, they needed to make the environment hospitable to these more demanding breeds of cattle. Thus the modernization of ranching and the domestication of the tropics went hand in hand. By contrast, the diffusion of zebu represented the renunciation of both such efforts. “It is an error to believe,” Zapata complained,

that ranching on the [Caribbean] coast can be improved by developing it extensively and carelessly. In this, many ranchers from Bolivar are mistaken, and for this reason they are inclined to mix their herds with zebu, in order to make their cattle more resistant and to care for them as little as possible.\footnote{94}

Thus while there were some legitimate concerns about the introduction of zebu into Colombia, issues such as disease and meat quality were invariably seen through the prism of such larger debates about race and progress.\footnote{95}

Although ranching modernizers hoped that, with the zebu ban in place, they could promote the Europeanization of Colombia's cattle population, by the late-1930s they had to concede defeat. As ranchers previously recognized, most acclimatization efforts ended badly and upgrading the national herd in this manner was unrealistic. Industry modernizers regrouped, but they did not rehabilitate the zebu. Instead, perhaps paralleling the rise of mestizo nationalism, they began to reevaluate the qualities and potential of Colombia's native cattle. One veterinarian suggested that, “If we give our creole breeds the kind of feed and care they need to survive in our environment, many of their physical deficiencies will largely disappear, and this new breed (now sick, degenerated, and malnourished) will move into the high ranks of those exported.”\footnote{96} As part of this shift, the government opened various breeding farms around the country to begin the work of improving Colombian cattle through selection rather than crossbreeding. They still urged ranchers to provide better care, but because local breeds were hardy, the chances of success seemed greater.

This shift in emphasis did not diminish the frustration of many ranchers and even some officials who increasingly pressured the government to lift the ban on zebu imports. By the late 1930s, a couple of factors were in their favor. First, zebu had gained greater acceptance internationally. Veterinary experts from the United States and Europe, in addition to Brazil, increasingly supported the use of zebu to improve (sub)tropical cattle operations. Consumers also demonstrated that they were willing to buy zebu beef, giving its proponents in Colombia more credibility. Additionally, the concerted effort of ranchers and livestock scientists to improve zebu breeds and crosses made it harder to argue that they were simply the product of nature. Second, the earlier fears of degeneration had to contend with the actual results that ranchers obtained by using zebu to upgrade their herds. Early
data from Colombia is hard to find, but a study carried out by a Brazilian experimental station allowed one booster to argue that because zebu-creole crosses resisted tropical parasites better than creole steer, by 24 months the former were 170 percent larger. With such impressive, zebu-based productivity gains, he projected that “we could start to export this article.” As a result of such evidence, growing pressure, and the de facto diffusion of zebu blood through Colombia, in 1939 the government rescinded the prohibition on importing zebu.

By the early 1950s, most cattle in the lowlands were zebu-creole crosses. The Zebu Question did not disappear, however. Instead it metamorphosed into a debate about the most appropriate way to utilize the animal. Underlying the dispute was the persistent effort to improve the productivity of Colombian ranching and lower the cost of beef for a rapidly growing population. (Dreams of becoming a prominent beef exporter were put on hold following the introduction of foot-and-mouth disease in 1950.) Some veterinarians maintained that the best results were obtained by crossing zebu with native breeds in order to take advantage of hybrid vigor. But this strategy required ranchers to maintain two separate ‘lines’ of cattle, something that most were reluctant to do. Instead, they chose to improve their herds by adding progressively greater amounts of zebu blood. Behind this ‘zebuization’ drive was a new image of what was considered progressive and modern—the large zebu bull—fostered by breeders and the growing influence of livestock shows. As Colombian ranchers neglected the country’s native breeds, government livestock stations, originally designed only to improve them through selective breeding, soon became one of the few remaining repositories of an increasingly endangered genetic stock. By 1976, 95 percent of Colombia’s beef herd was predominately zebu, and less than a quarter century later, only 1,522 Costeño con cuernos, the native breed of Colombia’s Caribbean lowlands, remained. The genetic transformation of the Colombian cattle herd was essentially complete.

CONCLUSIONS

How does the failure of the meatpacking plant at Coveñas and debates about the genetic transformation of Colombia’s cattle herd help us think about the broad issue of trade and the environment? One aspect highlights the relationship between environmental knowledge and commercial success. The development of resource frontiers requires more than just paying attention to market demand or production techniques; it also necessitates understanding local ecologies. In this case, however, investors were willing to risk significant capital on a project about which they had only superficial information. Merchants and capitalists commoditize and transform nature as they draw resources into global circuits of trade, but their investment decisions can be influenced by preconceptions about the environment, the
material properties of commodities, methods of production and extraction, and so on. Recycled notions about the productive potential of the tropics substituted for meager market research. Blinkered by the allure of fertile soils, luxuriant grasses, and cheap, undeveloped land, the packinghouse at Coveñas fell prey to the long-standing myth of El Dorado or the hope of finding hidden treasures in a lush landscape.

In addition, the context of impending scarcity generated an equally crucial speculative urgency. The outlook for global demand of beef appeared solid and meatpacking, in the early-twentieth century, was a leading industrial sector where vast fortunes had been made. There was also an interest, especially by the British, who were being displaced from control of the Argentine trade by American meatpackers, in developing commercial ties that would ensure a steady flow of carcasses to domestic butchers. The nature of many frontier resources, including beef—their finite supply, uneven quality, limited accessibility—meant that the window of opportunity could shut quickly: the best lands could be taken, the cost of raw materials might rise, competitors could be faster to grab market share. As a result, limited information had to suffice, and doubts about the size of Colombia’s cattle herd, the quality of its rangelands, or the productive potential of the tropics more generally fell by the wayside.

The failure of the packinghouse encouraged a radical shift in perceptions about the Colombian tropics and the potential of its cattle industry. In some ways, however, this move from buoyancy to gloom was restrained. On the one hand, the negative characterizations of the tropics and the proposed methods of overcoming their challenges were also based on limited information and excessive optimism. On the other, the seemingly opposed views about the prospects for tropical ranching fit neatly within the Janus-faced pattern by which Europeans described the tropics either as a garden of earthly delights or as putrid, pestilential, and unruly. Such contradictory portraits, according to Arnold, “were a potent form of othering”; they marked off the tropics as fundamentally distinct from “the perceived normality of the northern temperate zone.” Such projected differences lay at the heart of how Europe, or America, understood the tropics and justified their colonial and commercial interventions. While much of the scholarship on Tropicality has focused on the production of images and knowledge about the tropics by travel writers, artists, scientists, and colonial officials, the concept also serves to explore the attitudes and actions of northern investors looking to develop new resource frontiers.

At the same time, the Coveñas packinghouse fiasco and its repercussions highlight some of the limits to Tropicality’s Eurocentric origins. While there have been calls to pay “greater attention to the ways in which European conceptions of the tropics may have been shaped by interactions with indigenous peoples and places,” the results are still limited and tend to privilege northern agency. In this case, European and American assessments of the potential of Colombian ranching relied on the experience and perceptions
of local ranchers and officials. Ultimately, though, the traffic in ideas was circular: The perceptions that Colombians had of their tropical environment drew on, and were reinforced by, the European impressions that they had helped shape.

More significantly, the circulation of ideas about the tropics did not just move between Colombia and temperate latitudes; much of it occurred within the country. In this sense, the discourse of Tropicality was more than a way for the North to frame, incorporate, and perhaps dominate the South; it also responded to hopes, concerns, and debates within the tropics themselves. Faith in the bright prospects of Colombian ranching generated considerable investment by locals, not just foreigners, forcing cattle prices up significantly and leading to a wave of bankruptcies when they later collapsed. Government officials took advantage of the negative perception of the tropics, and the solutions offered by modern science, to promote the role and authority of a weak but growing state. Such modernization efforts could threaten the power of landed elites, a twist that focusing on European images of the tropics might miss. This also holds for the way that local understandings of the tropics intersected with eugenics and veterinary science in a project of national regeneration. Fundamental to this project was a belief in the possibility of transformation: the faith that the tropics could be domesticated and the racial makeup of its population could be improved. At the same time, the emphasis on national projects hid the way that images of the tropics were internally differentiated in Colombia—what Michael Taussig calls the ‘moral topography’ of the nation—with the ‘temperate’ highlands, where wealth and power were concentrated, counterposed to the dangers and disorder of the ‘tropical’ lowlands. In turn, such geographic differentiation facilitated the intertropical prejudices that surfaced with the perceived threat of ‘racial’ degeneration of the country’s cattle herd by Indian zebu.

The issues of agency and scale also surface with respect to trade. While the wheels of commerce transform landscapes by drawing new regions into their sphere of orbit, this case helps qualify the tendency to emphasize North Atlantic capital, markets, science, and boosters as the driving forces behind such metamorphoses. The effort to extend the North Atlantic beef frontier to Colombia was not just the result of foreign capital searching for new resources; local elites also pushed hard to develop such linkages. Although colonial veterinary science helped promote zebu in Colombia, firsthand experimentation by local ranchers played a leading role. In the end, it was the domestic market, not international trade, that generated much of the debate about the tropics as well as their actual transformation. The failure of the meatpacking plant at Coveñas did not eliminate cattle from the Caribbean lowlands from wider circuits of trade. Some were exported to neighboring countries, where the lack of cold chains helped to maintain the regional segmentation of global markets, but most made their way to the main population centers in the interior of the country. It was this domestic trade that kept prices high, diverting potential surpluses from foreign
markets, that encouraged ranchers to clear pastures out of the tropical forests and that stimulated the generic transformation of the country’s cattle.

Lastly, while recycled notions about the productive potential of Colombia’s Caribbean coast, as well as the power of modern science, fostered a false sense of optimism, ultimately it was the intractability of the tropics themselves that doomed the projects. Nature is not necessarily the ultimate arbiter. By planting African grasses, introducing new breeds, constructing tick-dipping tanks, and the like, Colombian ranchers managed to increase the productivity of the cattle industry. Nonetheless, the failure of the meatpacking plant was rooted more in natural than social factors. Given the cost of clearing the forest and planting grass, the only way that Colombian ranchers could have competed against Argentina or Australia was by introducing rapidly maturing European cattle breeds. Colombia’s tropical environment, however, precluded this possibility. Such ‘natural limits’ have social roots—such as the belated efforts to improve native breeds, the paucity of research on tropical ranching, a poor state with inadequate veterinary and extension services—and can disappear over time. But during the time period I explore in this chapter, there was no way that ranchers could have radically altered their productive base. The tropics matter as an idea as well as a material reality.

NOTES


6 Ministerio de Agricultura y Comercio, Memoria del Ministro de Agricultura y Comercio al Congreso de 1917 (Bogotá: Imprenta Nacional, 1917), LXVIII.


Reimagining the Tropical Beef Frontier and the Nation 187


12 These included the British and Argentine Meat Company, Smithfield and Argentine Meat Company, the Vesteys, International Cold Storage and Ice Company, Schwarzschild & Sulzberger, Swift, and Svenska Aktiebolaget. Swiss capital, which US officials feared was a cover for German interests, offered to back a group of Colombian investors. See Belden to SecState (Confidential), Dec 27, 1918, v. 215, 1918, Colombia, General Correspondence, Consular Records, Record Group (RG) 84, National Archive and Record Administration (NARA, College Park, MD).

14 Ministerio de Agricultura y Comercio, *Memoria 1917*, LXVII.


16 “Ley 82 de 1915 por la cual se fomenta el establecimiento de carnicerías y refrigeradoras (Packing Houses) para la exportación de carnes,” f. 355, vol. VI, Leyes Autografas, 1915, AC.

17 “Ley 82 de 1915,” f. 355, AC; Ministerio de Agricultura y Comercio, *Memoria 1917*, LXIX.

18 Ministerio de Agricultura y Comercio, *Memoria del Ministro de Agricultura y Comercio al Congreso de 1918* (Bogotá: Imprenta Nacional, 1918), 173. For information on the Perkins group, see “The meat trade: A new competitor enters the lists,” *Manawatu Standard*, January 25, 1910, 2. For more information on the Compañía Agraria del Caribe, see “Colombia Packing Concessions”, Sept 3, 1918, 1918/368/1894/151134, Foreign Office (FO), PRO. A large part of the International Products Company was owned by the American International Corporation and G.F. Sulzberger, Percival Farquhar, and Minor C. Keith served as vice-presidents. Its Colombian partner was Ganadería Colombiana, which was composed of Velez Danies & Co. and Diego Martinez & Co., each with a 40 percent share, and Julián Patrón and Caledonio Piñeres, each with ten percent. For more information on the International Products Company, see Belden to SecState, June 30, 1918, v. 215, 1918, Colombia, General Correspondence, Consular Records, RG 84, NARA.


21 “Informe de la comisión que visitó el Packing House de Covenas,” ff. 568-592, vol. IV, Asuntos Varios, Cámara de Representantes, 1922, AC.


24 Lester Schnare, “Operation of Packing House at Covenas, Colombia,” Feb. 12, 1926, Box 133, Colombia, Narrative Reports 1904-39, FAS, RG 166, NARA.

25 Moré, Rancho Grande, 85.


30 Quoted in Ministerio de Industrias, Memoria 1924, 39-40. See also Schnare, “Cattle Raising,” NARA.

31 Schnare “Cattle Raising,” NARA. See also Ministerio de Industrias, Memoria 1924, 37-40.

32 Schnare “Cattle Raising,” NARA.

33 Arnold, “Illusory riches,” 7, citing Philip Curtin.

34 Mary Louise Pratt, Imperial Eyes: Travel Writing and Transmigration (London: Routledge, 1992), 109-140; Stepan, Tropical Nature.

35 Jerry Hoeg, “Andrés Bello's 'ode to tropical agriculture': The Landscape of independence,” in Beatriz Rivera-Barnes and Jerry Hoeg, Reading and Writing the Latin American Landscape (New York: Palgrave Macmillan, 2009), 53-66.

36 See Medardo Rivas, Los trabajadores de tierra caliente (Bogotá: Banco Popular, 1972).


In the mid-1920s, the high cost of Colombian cattle was also a function of the rapid rising demand that stemmed from a revival of the coffee economy and an inflationary period of foreign lending and infrastructure development known as the "Dance of the Millions."
190 Shaun Van Ausdal

55 Ministerio de Industrias, Memoria 1930, 290.
56 “Ley 82 de 1915,” f. 345, AC; Ministerio de Industrias, Memoria 1930, 10.
59 Ministerio de Economía Nacional, Informe del Ministro de la Economía Nacional presentado al Congreso de 1944 (Bogotá: Editorial Minerva, 1944), 78.
64 Gómez Rueda, “Producción pecuaria,” 35.
65 Gómez Rueda, “Producción pecuaria,” 37.
67 Raúl Varela, “Memorándum sobre el Departamento del Atlántico,” Boletín de Agricultura 3(1930), 630.
70 Ministerio de Industrias, Memoria 1930, XLI.
72 Manuel Jiménez López, “Algunos signos.”
78 Mariano Ospina Pérez, “El problema sanitario de Colombia es el primero dice el Dr. Mariano Ospina Pérez” (Bogotá 23 ago 1934),” in Muñoz, Tragedia
Reimagining the Tropical Beef Frontier and the Nation


83 Also see Anonymous, “La camay el trabajo intellecital,” *Ganadería de Bolívar* 43-44(1937): 1269.


90 Ochoa, “Porqué se prohibió,” 537.

91 Ochoa, “Porqué se prohibió.”

92 Zapata, “Ganado de raza cebú,” 125.

93 I have not found explicit references to the racial inferiority of the zebu in the Colombian sources. By contrast, geographer R.H. Whitbeck wrote: “This black-skinned animal is, like the negro, an adaptation to a tropical climate” in “The agricultural geography of Jamaica,” *Annals of the Association of American Geographers* 22(1932): 25. Australian ranchers in the 1930s were also more unequivocal in their fears of “mongrelization.” See Beverly Angus, “The history of the cattle tick *Boophilus microplus* in Australia and achievements in its control,” *International Journal for Parasitology* 26(1996): 1348.

94 Zapata, “Ganado de raza cebú,” 126.


102 Driver and Yoeh, “Constructing the Tropics,” 3.
104 Van Ausdal, “Productivity gains.”
Part IV

Competing Modernist Logics