Beyond Isolation: The Mississippi Delta in a Global World

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BEYOND ISOLATION:
THE MISSISSIPPI DELTA IN A GLOBAL WORLD

A Dissertation
Presented in partial fulfillment of requirements for the
Doctor of Philosophy
Degree
Department of History
The University of Mississippi

by

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ABSTRACT

This study examines the paradoxes and complexities of the Mississippi Delta through an international lens. The fundamental premise guiding the research is that goods, people, ideas, technology, and capital cross national borders; therefore, local transformations can only be fully understood within a global context. The study concentrates on the evolution of the reciprocal, complex relationship between the region and the international community, along with the local and global consequences of a series of transnational exchanges. With a primary focus on agribusinesses, the research challenges traditional visions of the Delta as an isolated and provincial region immune to modernization. Instead the work reveals a region deeply integrated into the international marketplace through the rapid adoption of modern technology, communication and transportation systems, and advances in agri-science. In sum, the research strives to globalize the history of Mississippi Delta in order to gain a more comprehensive understanding of the social, economic, political, and cultural development of the region.
DEDICATION

For my mother,

Elsie Hays Lindsey

July 31, 1941—October 23, 2010
ACKNOWLEDGMENTS

Through the years that I have worked to complete this dissertation, many friends, colleagues, and professors have offered encouragement and support. I am especially grateful for the gentle and patient guidance of Dr. Ted Ownby. Without his assistance I would not have completed the project. I want to express my appreciation to those who generously agreed to serve on my committee and offer advice for improving the study: Dr. John Green, Dr. Charles Ross, and Dr. Charles Reagan Wilson. Thanks also go to the faculty and staff in the Arch Dalrymple III Department of History and the Center for the Study of Southern Culture at the University of Mississippi, particularly Drs. Joe Ward, Chiarella Esposito, and Elizabeth Payne.

I am grateful for the emotional support of my family through the many transitions in my life during the past decade: my daughter, Anne Lindsey Prewitt, and grandson, Tyler, my father, James Lindsey, and my sister, Melinda Alford, and her family, Swayze, Lilli, and Grace. I also want to thank Bill Pitts for his support during the final stages of the project. Many thanks also go to my colleagues and friends at Oxford High School, especially John Davenport, Kendedrick Jones, Sommer Husbands, Emily Maples, Joe Sabatier, Rebecca Mann, and Joan Westmoreland. Additional thanks go to Dr. Bill Hays, who read and offered comments for improving the text.

For many years, my Cleveland community of friends and instructors encouraged me to continue my academic pursuits. Faculty and staff members at Delta State University provide me with many opportunities for academic development, participation, and camaraderie. They
include Bo Morgan, James Robinson, Curt Lamar, John Thornell, Jerry Dallas, Collier Parker, Janice Arnold, Miriam Davis, Luther Brown, Lee Aylward, and Henry Outlaw. For years a core group of devoted Delta friends has provided entertainment and much needed emotional support on this journey. Thanks go to Dudley Morgan, Mary Jo Aguzzi, Julia Ming, Katherine Crump, Cindy Coopwood, and Mimi Dossett.

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“In the Delta, what you think you’re seeing is not always what you’re actually seeing.”
Susan Hines, transplant to the Delta, 2009

“Historical myths may be considered inaccurate observations that people prefer to believe. Often, they are not all wrong, which enhances their believability, but they are not accurate or detailed enough to serve as useful for historical understanding.”
Stanley L. Engerman, Historian, 2005¹

The title of the photo exhibition, “Contrast: a visual exploration,” seemed appropriate for a series of images depicting life in the Mississippi Delta. The modern photographs of economic disparity and social contradictions displayed against the rough cypress beams and aged brick of a former cottonseed warehouse provided a visual metaphor of the region itself, a place of irreconcilable extremes. Like the photographs, studies of the region often focused on, or alluded to, the obvious dichotomies of the Delta: a biracial society of wealthy elites and exploited sharecroppers; home of segregationist senator James O. Eastland and civil rights activist Fannie Lou Hamer; birthplace of the White Citizens’ Council and the Blues; a region that is both hospitable and hostile; innovative and stagnant. This study of the Delta examines the paradoxes and complexities of the Delta from a global perspective. The research concentrates on the

evolution of the reciprocal, complex relationship between the Mississippi Delta and the international community, drawing attention to the innovative, reactionary, and transnational nature of the region.

Through a series of case studies that focus on individual actors, the research examines how local Delta producers and entrepreneurs facilitated or resisted global flows of goods, people, ideas, technology, capital, and culture in order to maintain or improve their economic status and consolidate political power. The study documents the actions and attitudes of the white Delta men as rational, deliberate actors engaged in ongoing exchanges with the international community throughout the twentieth century. Innovative, ambitious, and thoroughly modern in their global outlook, these Delta elites displayed a high degree of liberal cosmopolitanism in international affairs, as they continued to oppress and exploit African Americans at home. Told through their voices and from their perspective, the work helps reveal the logic behind the decisions and actions of white elites and sheds some light on the deep divides and perplexing contradictions in the Delta, the northwest region of Mississippi with some of the richest farmland in the world and poorest citizens in the nation.²

The study is not designed to produce a comprehensive global analysis of the Delta and its relationship with the international community, but an informative sampling of the exchanges between Deltans and the world along with the repercussions, both positive and negative, these global encounters produced. The research strives to globalize Delta history in order to gain new insights into the anomalies and contradictions of the region: the improbability of finding ethnic

² The eleven core counties referred to in this study include Bolivar, Coahoma, Humphreys, Issaquena, Leflore, Quitman, Sharkey, Sunflower, Tallahatchie, Tunica, and Washington, as identified in A.G. Cosby, M.W. Brackin, T.D. Mason, and E.R. McCulloch, eds., *A Social and Economic Portrait of the Mississippi Delta* (Mississippi State, MS: Social Science Research Center, Mississippi Agricultural and Forestry Experiment Station, 1992), 47.
diversity in a predominantly biracial society, the difficulty of reconciling major scientific advancement some of the lowest educational achievements in the nation, and the challenge of placing modernity side by side with extreme poverty and human suffering. Simply put, local transformations can only be fully understood within a global context.

Review of Literature

The purpose of this research is to contribute to a growing body of work that emphasizes the need to place southern history, as well as national history, into a broader international context. As early as 1953, C. Vann Woodward suggested that the American South shared more in common with the rest of the world than with the rest of the nation. Furthermore, James C. Cobb and William Stueck, prominent historians of the South, have repeatedly argued “…there is more value in studying the South as a part of the world than as a world apart.” Woodward, Cobb, and Stueck are part of an expanding group of scholars who recognize the value of an international approach to southern history. According to Peter Kolchin, the move toward the globalization of southern history accelerated in the 1980s, moving through three recognizable stages: the North–South dichotomy, the “many souths” approach, culminating with the recent transition to an “other souths” framework which scholars around the world used to uncover both the particular and the universal characteristics of the American South within the context of the international community. In recent years, academicians across the disciplines increasingly turned to an international framework for a more comprehensive evaluation of southern history, culture, social

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structures, and economic development.\(^5\)

David L. Cohn and James C. Cobb recognized the need for additional research on the Delta as sub-region within American South, yet solidly connected to the rest of the world. In the 1930s Delta native, David L. Cohn, set out to “rediscover” the Delta of his youth but found himself in a conflicted mental state: “I began to discover that this apparently simple society was highly complex. It was marked by strange paradoxes and hopelessly irreconcilable contradictions.”\(^6\)

Decades later James Cobb had a similar experience. In the introduction to his cultural study of the region, *The Most Southern Place on Earth: The Mississippi Delta and the Roots of Regional Identity*, Cobb admitted that he was one of many who initially considered the Delta “an isolated, time-warped enclave…” but as his research progressed, his attitude changed: “I grew to regret my impressionistic observations, not because I had exaggerated the Delta’s southerness, but because I had oversimplified and, to some extent trivialized it. The Delta that ultimately emerged from my study was no mere isolated backwater where time stood still while southerness stood fast.”\(^7\) He stressed the role of national and international forces on the development of the Delta and attempted to explain the complexities and paradoxes that confounded visitors, scholars, and natives alike, “In reality, …many of the human and material extremes that were keys to the Delta identity either as the ‘South’s South’ or ‘America’s Ethiopia’ were shaped not by its isolation but by pervasive global and national economic influences….\(^8\) In the end, he called for a global examination of the region: “My experience in studying the Delta suggests the need to …look outward and reexamine the South’s socio-economic and cultural characteristics within the


\(^8\) Ibid., 333.
context of its interactions with, rather than in isolation from, the larger national and global setting.¹⁹ Both David Cohen and James Cobb intuitively sensed the limitations of a local and national analysis of the history and culture of the Mississippi Delta. Cohn, the world traveler, and Cobb, the scholar, recognized the need for a global perspective. Both men produced astute observations of the region and paid homage to the global forces at play, but both stopped short of a broader internationalized history of the Delta.

After publication of *The Most Southern Place on Earth* in 1992, James Cobb followed his own advice and began editing David Cohn’s memoirs, *The Mississippi Delta and the World*, an insightful look at the social, economic, and racial attitudes of Cohn and his fellow Deltans from the perspective of a local Jewish man, international traveler and intellectual.¹⁰ During the years that followed, Cobb along with fellow historians, economists, and anthropologists turned their attention to the “globalizing South,” culminating in a series of conferences on the topic. In 2005 two collections of essays on the “global South” appeared, signaling the shift from simplified stereotypical versions of southern history to a modern internationalized historical model.¹¹ In August of 2008, the *Journal of Southern History* published a special issue commemorating decades of research and reflecting on the current state of the field. Appropriately, the issue featured a historiographical article, “The South and the World,” in which Peter Kolchin traced the internationalization of southern studies from the earliest reflections of David M. Potter and C. Vann Woodward on the usefulness of studying the South in a broader context to more recent studies concentrated on comparative and transnational histories. In short, historians of the

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¹⁹ Ibid., xi.
American South answered the call to globalize American history through an international approach to southern history. Over the years, a number of historians recognized the connections between the Delta and the global community, but their primary concern remained local. For example, in 1967 Robert Brandfon published a study covering the four decades of rapid development in the region following the Civil War. His research offered an interesting narrative of the visit of Italian authorities and their role in promoting—and often thwarting—Italian immigration to the region. Even more importantly, Brandfon documented the influx of “outside capital” that funded railroad construction, which transported Delta cotton to the global marketplace with greater efficiency and exposed Delta planters to the cosmopolitan cities of Memphis and New Orleans. Brandfon commented on fluctuations in the international price of cotton, supply and demand around the world, as well as British imperialism and investment in the Delta, but his primary interest centered on the impact of the expanding national railroad system on the region. Thirty years later John C. Willis reexamined the post-Civil War years in the Delta, and argued that for a brief time freedmen found opportunity in the form of landownership. He alluded to global forces at play, but like Brandfon, his focus was primarily local not international.

Surprisingly, studies of the Jews, Italians, Chinese, Lebanese, and Hispanic immigrants who settled in the region offer little in the way of a comprehensive international analysis, but a couple of exceptions should be noted. First, in the introduction to their study of Jews in

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Mississippi, Leo and Evelyn Turitz present a brief overview of conditions in Europe which influenced Jewish migrations while several works on the Delta Chinese refer to the impact U.S. immigration policy and regime changes in China had on the migratory patterns of Chinese nationals. Paul Canonici offers a more detailed explanation of global interconnectedness in his book, *The Delta Italians*. Canonici traveled back and forth between Mississippi and Italy accessing sources and documenting the international travel experiences of Delta Italians. He discusses the transfer of religious and ethnic culture from one rural setting to another along with the development of a transnational relationship between the Church, the clergy, and the Delta parishioner. Granted, all research on immigration is inherently international in nature, but the bulk of the work on ethnic groups in the Delta has focused on the local as opposed to the global.

Compared to fellow historians, blues scholars have done a more comprehensive job of employing an international perspective for historical analysis. Alan Lomax, William Ferris, Ted Gioia, Elijah Wald, Robert Palmer, and James Cobb focus on the connections between African musical and performance heritage and the blues. Lomax and Palmer draw a direct line from the African diaspora to the evolution of Delta blues music and the emergence of a global rock and roll community, while Gioia and Wood argue that African influences seem obvious but admit the international lineage of the music is more difficult to trace than some have suggested. Furthermore, disagreements exist over whether the music was a product of rural isolation or of “youth, mobility, and modernity”. Regardless of their position in these debates, most music

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scholars approached the subject with some recognition of the historical impact of transnational exchanges on the artistic and social life of Delta blues music.\textsuperscript{17}

In recent years, there has been a noticeable shift in Delta scholarship as academicians moved beyond regional and national boundaries to assume a supranational view of the region. In 2003, Nan Woodruff published her research connecting the oppressive sharecropping system of the Mississippi Delta to the brutality of King Leopold’s African Congo concluding that both systems resulted from the global expansion of European colonialism and western capitalism. In other words, the Delta’s economic political culture was not a product of regional backwardness, but an integral part of the much larger twentieth century global economic system.\textsuperscript{18} In 2008, Chris Myers Asch published his history of Sunflower County, \textit{The Senator and the Sharecropper}, and arrived at some of the same conclusions James Cobb reached twenty years earlier: “Living in Sunflower County for the better part of decade helped knock me off the outsider’s pedestal and forced me to confront certain uncomfortable truths…. Try as we might, we cannot pin the blame for Sunflower’s (and America’s) persistent inequality solely on unreconstructed racists…. We must recognize that other powerful forces particularly global economic forces that have grown stronger in recent decades, created conditions that circumscribed both the senator and the sharecropper, just as they continue to constrain us today.”\textsuperscript{19}

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\textsuperscript{19} Chris Myers Asch, \textit{The Senator and the Sharecropper: The Freedom Struggles of James O. Eastland & Fannie}
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My research follows in the footsteps of Woodruff, Cobb, and Asch in an effort to contribute to a more comprehensive understanding of the Delta from a transnational perspective. The proposed project draws from the work of scholars across the disciplines. James Peacock’s innovative work on “grounded globalism” offers a theoretical foundation for the study of global transformations in the American South and shifts the framework from an oppositional North/South dichotomy to an inclusive transnational community, while Kenneth Pomeranze’s and Steven Topik’s explorations of the world economy, the social lives of commodities, and the role of local agency in a global economic system prove useful for understanding the social and economic impact of the global marketplace. Additional studies of globalization and place successfully connected local transformations to transnational exchanges. For example, Wanda Rushing’s sociological-historical study of Memphis is an excellent example of the benefits of exploring southern spaces as active participants in the globalization process. I am also keenly interested in social psychology, cyclical poverty, and regional identity as a product of both internal and external forces. In other words, this research circumvents historical absolutes, stereotypes, myths, and legends and uses with a global framework to analyze the history Mississippi Delta.

Chapter Outline

Chapter one offers a brief review of literature and describes the general purpose and guiding philosophy behind the research. Chapter two examines the region’s development in the

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early decades of the twentieth century with an emphasis on the volatile international commodities market and its impact on the region. Global market fluctuations, World War I, and a transnational biological event—the boll weevil crisis—drove biological, chemical, and technical innovations in the region, which, in turn, contributed to the ongoing process of modernizing commercial agriculture. The chapter draws attention to the formation of an institutional framework of federal and state agencies in the Delta and the establishment of a research community that became world renowned for its high concentration agriscientists and prolific production of advanced agricultural research. The chapter also traces the history of seed breeding programs established during the period that contributed to the biotech revolution in the latter part of the century.

Agriculture became an important instrument of foreign policy after World War II during the Cold War. Chapter three explores how Delta businessmen—with the federal and state support—exported American style agriculture to promote democracy and economic development abroad—while denying local citizens the same rights and opportunities at home. Chapter four analyzes the transformation of the agri-business community as advances in biotechnology led to the merger of transnational chemical corporations with independent Delta seed companies and introduced genetically modified crop technology to the global market. The chapter begins with the 2001 famine in Africa and tells the story of Delta native and international aid worker, Richard Ragan, who found himself at the center of the international debate over genetically modified food aid at the peak of the crisis in Zambia. The rest of the chapter documents how local actors played a central role in the globalization of GM commodities.

Chapter five traces the rise of the aquaculture industry in the Delta during the 1980s and
trade wars that ensued when Vietnamese fish imports threatened the region’s Catfish industry. The chapter also examines how striking catfish workers in the Delta managed to win concessions even as labor unions were on the decline and competition from immigrant labor on the rise. Chapter six focuses on the entrepreneurial tradition in the region and ways Delta businesses participated in the international marketplace, and the final chapter offers summary comments and reflections.

The study reveals a Delta that has never been “a world apart.” Instead, global forces continuously shaped and reshaped the region while Deltans actively participated in the transnational flow of people, goods, capital, technology, science, and culture throughout the twentieth century.
CHAPTER II
MODERN AGRICULTURE IN THE DELTA

“The rural South in the first quarter of the century was complex and dynamic… The South defied stereotyping, for it harbored great contradictions.”


“Simply put, the South was born of global forces, and, if we think hard enough and look deep enough, we come to understand that the region, economically speaking, has remained in and of the world ever since.”

Peter A. Coclanis, 2005

In 1911 a small package addressed to Early C. Ewing arrived in Mississippi, from Washington, D. C. After spending several years outside the state, the young researcher had accepted a position at the Mississippi Experiment Station in Starkville and he was coming home. Ewing grew up in Aberdeen, a small town in the northeast corner of the state, less than 40 miles from Mississippi State College where he earned a degree in chemical engineering. He left Mississippi to study agriculture at Cornell University in New York where he was introduced to the most exciting scientific theory of the time—Mendel’s laws of inheritance, which evolved into the modern field of genetics. In his memoirs Ewing wrote about his experience: “The theories of

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Mendel and De Vries have been generally accepted as valid by biologists and these theories have supplemented the theory of evolution through the effects of natural selection and the survival of the fittest previously promulgated by Charles Darwin. The rediscovery of Mendel’s law and publicity given to that epoch-making work stimulated a great deal of interest and activity in genetic research. I had been steeped in all of this at Cornell University, fortunately.”

After graduation, Ewing worked for the United States Department of Agriculture where he spent summers in cotton fields in Texas and winters in Washington, D.C. During his time in Texas he “made the acquaintance of two experimental cottons which were not being grown commercially but destined to have a lasting effect on the cotton industry.”

The first variety was Express, the other Foster. Unimpressed with the performance of Express cotton, Texans destroyed the entire stock of seed. But Ewing retrieved a small sample that had been spared: “It happened that a package of about one peck was in Washington. When I arrived at the Mississippi Experiment Station at Starkville in 1911, I obtained that small package. It was of no interest to anyone else in Texas.” From the contents of that packet, Ewing spent the next 50 years building a cotton seed breeding program that a century later sold for 1.5 billion dollars.

From the turn of the century until the outbreak of World War II, the Mississippi Delta experienced a series of global economic disruptions coupled with environmental and biological devastation. White Delta elites reacted to fluctuations in the international markets demanding federal action in the form of farm subsidies. In addition, the local agricultural community

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5 Ibid.
implemented ambitious programs to facilitate economic cooperation and scientific innovation. In tandem with the progressive ideology of the period, Delta elites promoted efficiency, scientific knowledge, professional expertise, and technology to modernize agriculture and remain competitive in the international market. They were not alone in this endeavor. A host of federal and state agencies formed an institutional infrastructure that provided a vast informational support system for farmers, educating them on the latest advances in science-based agriculture. Delta farmers, acting on their own initiative and with the assistance of government scientists and engineers, embraced biological and mechanical innovations and modern organizational practices to address the global challenges commercial agriculture encountered in the first half of the twentieth century.

**Building an Institutional Framework**

In the late 1800s, the interior regions of the Delta remained relatively undeveloped until timber companies harvested acres of hardwood forests and cleared vast tracts of land for settlement. Railroad lines soon followed and developers transformed the landscape of the Mississippi Delta. Around the turn of the century, small farmers and large landowners seized the opportunity to purchase property, and the population in the Delta grew. Expansion in the region coincided with a wave of Progressive reform efforts that swept across the nation and influenced federal policy decisions. Reformers believed science, efficiency, and knowledge provided the foundational principles for correcting social and economic problems in the modern industrialized society. Progressives placed their faith in two key elements of reform: a more active federal
government and expanded access to education. Years earlier, Congress had passed the Morrill Land Grant Act, which allocated funds and land grants for establishing agricultural colleges and research programs to meet the growing need for a more educated workforce. Mississippians took advantage of federal dollars and established two land-grant institutions in the state: Alcorn University (1871), later renamed Alcorn State University, and the Agricultural and Mechanical College of the State of Mississippi (1878), also known as Mississippi A&M, and later renamed Mississippi State University. In 1888, the college set up an Agricultural Experiment Station in Starkville. Around the turn of the century, farmers increasingly turned to basic and applied science to maintain profit margins.

During the early 1900s, Mississippi Delta farmers faced serious problems: flooding, soil depletion, insect damage, plant diseases, weed control, and the ever present need to increase production. In 1904, the Mississippi Legislature granted authority to Mississippi A&M College to build a branch agricultural experiment station “at some point in the state in what is known as the Yazoo and Mississippi Delta, or in some county adjoining said Delta at a point where experiments with the soil of the hills as well as the Delta can be made.” The state legislature set aside $3,000 for the first year of operation, with funding for the facility contingent upon the acquisition of donated land. Progressive Delta producers lobbied aggressively to locate the research facility in their region of the state. In order to meet the land requirement, Delta farmers raised $15,000 in private funds and purchased 200 acres in Washington County near a small

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9 Amy Lipe Taylor, *The Delta Branch Experiment Station: 100 Years of Agricultural Research*, ed. James W. Smith and Charles E. Snipes (Starkville, MS: Mississippi State University, 2004), 13.
community of Stoneville, Mississippi. Because of their efforts, the Delta Branch Experiment Station was located in the center of the Delta near the town of Greenville.\textsuperscript{10} By 1914, the U.S. Department of Agriculture, land-grant colleges, Cooperative Extension Services, research experiment stations, and county agents collectively formed an institutional infrastructure for modernizing U.S. agriculture.\textsuperscript{11}

Officially named the Yazoo-Mississippi Delta Experiment Station, locals referred to the research facility as the “Station” or “Stoneville” for the community nearby.\textsuperscript{12} A small staff of agronomists and engineers focused on the most pressing problem at the time—drainage. Flooding remained a serious threat to the region resulting in the loss of millions of dollars when the crops drowned out and seed rotted in the muddy fields. Farmers either lost the entire crop or—if early in the season—purchased seeds and replanted, which increased their input costs significantly. Scientists investigated methods for increasing yields, minimizing insect damage, replenishing the soil, and improving overall efficiency. Agronomists conducted field trials on corn, cotton, corn, alfalfa, and legumes. Others calculated the profitability of cattle and hog farming and engineers designed new implements.\textsuperscript{13} Researchers and economists implored farmers in the Delta and across the South to modernize and diversify their operations. In fact, the advice was so pervasive, historian that Gilbert Fite declared, “If southern commercial famers could have cashed in the advice they received on the merits of diversified agriculture, the virtues

\textsuperscript{10} Ibid., 8-13.
\textsuperscript{12} Donald H. Bowman, \textit{A History of the Delta Branch Experiment Station, 1904-1985} (Starkville, MS: Mississippi State University, 1986), 2.
\textsuperscript{13} Ibid., 3-6.
of scientific farming, and the benefits of farm efficiency, they would all have been rich.”

But despite the admonishments of agricultural experts, the unpredictability of the global market, and the advance of the boll weevil infestation, cotton remained the dominant crop in the Delta.

The Largest Cotton Plantation in the World

In 1910 a series of international events lured British investors to the Mississippi Delta. The supply of Egyptian high quality long-staple cotton for British mills decreased significantly. While records are not clear, the most likely causes were weather, disease related, or both, and in order to maintain production, the British were forced to seek out new sources of fiber. In 1910, delegates from the Fine Cotton Spinners & Doublers Association, a professional organization representing approximately 50 textile firms, attended a conference in Brussels, Belgium. At the meeting, Jesse Fox, director of the Delta Station, delivered a paper titled “The Causes of the Present Shortage of American Cotton and the Means to Adopt in Order to Prevent a Recurrence.” While no written record exists of the encounter between Fox and the delegates, oral histories and events that transpired after the conference indicate they discussed the problem of securing quality U.S. fiber for the British mills. Fox traveled to Manchester, England in 1910 where he and the Fine Spinners most likely discussed the possibility of investing in cotton land in Mississippi. Fox later maintained the Spinners offered him a position if they purchased property in the U.S.

In the Delta, Charles Scott, Delta planter, banker, and attorney, joined forces with land

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14 Fite, Cotton Fields No More, 69.
15 Taylor, The Delta Branch Experiment Station, 23; 1911 the US produced 72 percent of world’s cotton, Fite, Cotton Fields No More, 175.
speculator Lant Salsbury and put together a land deal to present to the Fine Spinners. Salsbury traveled to England where he enticed representatives of the association to visit the region. In the spring of 1911, the English fine cotton spinners spent weeks looking over property in the Delta and agreed to purchase over 30,000 acres of land near Scott, Mississippi. Historian Lawrence Nelson documented the details of the final days of negotiations and sale of the property:

…the English guests toured the properties in Bolivar and Washington Counties proximate to Scott Station, the railroad stop named after the Mississippi planter. It all totaled more than thirty thousand acres, most in cultivation, but much covered by timber. Well treated and generally well pleased, the English hunted wild geese in pre-dug pits along the Mississippi River, part of the selling job that Johnston later called “high pressure promotion.” Their American visit, bolstered by legal and financial advice relative to the properties, lasted several weeks and led to a favorable report to the full executive board back in Manchester. On April 12, 1911, the Fine Spinners agreed, the secretary cabling Salsbury of their acceptance.

After a series of name changes, legal maneuverings and property mergers, the British christened the farm the Delta and Pine Land Company, the largest cotton plantation in the world. The sale marked the beginning of a seventy-year relationship between British investors and the Delta. In 1911, no one could have predicted the impact the transaction would have on the future of global agriculture.

**Biological Innovation in the Delta**

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17 Apparently there was a great deal of foreign interest in American farmland at the time, see Lawrence J. Nelson, *King Cotton’s Advocate: Oscar G. Johnston and the New Deal* (Knoxville: University of Tennessee Press, 1999), 23-26.

18 Ibid., 25.


The same year the British purchased D&PL, scientists set up the first seed breeding program at the Delta Station. Researchers conducted experiments cotton during Jesse Fox’s administration, but scientific breeding techniques were not introduced until the arrival superintendent George Walker. Early Ewing from the experiment station in Starkville in collaboration with Walker instituted a program to develop superior seed varieties bred specifically for the Delta soil and climate. The two varieties Ewing brought with him to Mississippi in 1911, Express and Foster, provided the foundational material for cotton breeding programs at the Delta Station other branch stations across the state.

Traditionally farmers saved their seeds from season to season, but with advances in genetics scientists in laboratories with the ability to control trials and collect data over a period of time became a much more reliable way to produce high quality seed. Government funding for agricultural research expedited the process and it became more cost efficient to purchase new seed each year as opposed to storing supplies for the following season. Historian Mark Winston asserts that by 1918 U.S. farmers purchased approximately 60% of their planting stocks, and researchers bred most of those varieties at government funded facilities. In other words, the merger of science and federal dollars made commercial seed an economically viable option for American farmers.

The Delta Station developed a thriving seed business, and private companies immediately recognized the profit potential in commercial seed sales. At the time, plant material could not be patented, therefore seed lines developed at government funded experiment stations were in the public domain. Commercial seed suppliers grew in number and in 1922, George Walker resigned

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his position as superintendent of the Delta Station to found a private company, Stoneville Pedigreed Seed. Walker conveniently located his offices across the creek from the Station research labs, facilitating exchanges between scientists at the Station and breeders at the seed company. In the Delta, Stoneville Pedigreed Seed and D&PL took advantage of easy access to federally funded research and government-trained personnel. Exchanges of biotechnology and breeding materials between the Station, Stoneville Seed, and D&PL were commonplace and continued for decades.

Over the years a discernable pattern developed as private agri-businesses or large farming operations lured Mississippi A&M scientists and engineers away from the research station. Of the first five superintendents, all were A&M graduates or former faculty members who transferred to the private sector. The first director of the Station accepted a job with a chemical company, American Cyanamid, another took a position at D&PL, and two opened private agri-businesses, a farm implement dealership and seed company. Scientists and breeders at the facility were also hired away. In 1915 Jesse Fox, former superintendent of the Delta Station, working for the British at D&PL, recruited Early Ewing to head seed development at the company and the cycle continued.

Due to their close proximity to the research station, Delta farmers benefited from early access to advanced agricultural practices, high quality seed, and modern equipment with the greatest benefits accruing to large, progressive producers. According to historian Pete Daniel,

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23 Bowman, A History of the Delta Branch Experiment Station, 10; Roy Meeks (retired former Vice President of Sales, Stoneville Pedigreed Seed) interview by author, July 5, 2016, at former offices of Stoneville Pedigreed Seed, Leland, Mississippi, notes in author’s possession; Taylor, The Delta Branch Experiment Station, 23.
“…two types of farming emerged in the South. More wealthy farmers bought machinery and diversified, and they paid attention to new farming methods taught through county agents, agricultural schools, and farm magazines. Sharecroppers continued in the old ways, but their cost of production rose, actual production decreased and their sparse earnings fell.”27

**World War I and the 1920s Farm Crisis**

The outbreak of World War I marked the beginning of more than two decades of economic, environmental, and biological disasters in the Mississippi Delta, but 1914 appeared to be a promising year. The boll weevil infestation moving across the South had not reached the region, cotton farmers had a healthy crop in the field, market prices remained high, and producers anticipated substantial profits in the fall. But their enthusiasm was short lived. On July 31, 1914, three days after Austria-Hungary declared war on Serbia, the cotton exchanges closed. Producers, bankers, ginners, shippers, and the other businesses connected to the cotton industry stood to lose millions of dollars. That fall cotton farmers harvested over 16 million bales, a record-breaking crop, but when markets reopened in November prices dropped 40 percent.28 Cotton prices recovered during the war, but many southern farmers continued to suffer heavy financial losses due to boll weevil damage.29 Following war commodity prices collapsed and for the rest of the decade the global cotton market remained extremely volatile. In the Delta, cyclical market downturns coincided with the arrival of the boll weevil in the early 1920s, which left Deltans no time to recover financial losses before the devastating flood in 1927.

Market disruptions during World War I and price fluctuations in the years that followed

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29 Ibid., 94-95.
forced Deltans to adapt to the economic realities of the period. As the demand for grain increased, staff at the research station again encouraged diversification. In 1920 the Station hired a new full time plant breeder, W.E. Ayers, who founded a corn breeding program at the facility. Ayers and his team conducted research on oats, corn, and cotton varieties with specific characteristics for conditions in the region. The following year, Mississippi farmers reached a new high in corn acreage with over 3,000,000 acres harvested.\textsuperscript{30} By 1920 the boll weevil posed a serious threat to the Delta, a powerful incentive to diversify, but cotton remained the dominant crop in the region. Researchers at the Station continued to breed new cotton varieties for higher yields and early maturity to minimize insect damage and test chemical combinations to repel boll weevils.\textsuperscript{31} And Deltans would need every possible resource to deal with the challenges they faced in the decade ahead.

The cotton market recovered in 1919 and Delta farmers enjoyed a brief period of prosperity before the market debacle of 1920. That year cotton prices dropped from ninety-five cents per pound to fifteen. Others claimed an even wider margin citing prices as high as a dollar per pound to as low as 5 cents a pound.\textsuperscript{32} Other commodity prices fell as well, and the agricultural sector of the U.S. economy entered a deep depression. The 1920s ushered in the age of associations and cooperatives. Secretary of Commerce Herbert Hoover promoted business “associationalism,” an organizational ideology that encouraged regional businesses to cooperate to control production and to market their products. Deltans, desperate for a way to temper the

\textsuperscript{30} Taylor, \textit{The Delta Branch Experiment Station}, 67-68.
\textsuperscript{31} Bowman, \textit{A History of the Delta Branch Experiment Station}, 9-10; Taylor, \textit{The Delta Branch Experiment Station}, 23.
effects of an erratic global market, embraced the concept. Historian Lawrence Nelson wrote that after prices plummeted in 1920, “The cooperative fever burned across the land infecting the Mississippi Delta, laden with long-staple cotton. Within seventy-five to one hundred miles of Clarksdale grew most of the world’s supply of long-staple varieties, cotton which had always commanded premium prices over middling grade.” In 1921, Delta boosters and farmers organized the Staple Cotton Cooperative Association to pool the Delta’s long-staple cotton and hopefully gain an advantage in the cotton market. Initial funding for the cooperative came from a 5 million dollar loan secured through the War Finance Corporation. The company established headquarters in Greenwood, Mississippi, and Staple Cotton directors hired William M. Garrard, a seasoned cotton trader, as general manager and offered him one of the highest commissions in the industry, 25 cents per bale, a major incentive and evidence of the commitment of Delta planters to aggressively market their cotton using modern techniques in a dated system. The cooperative succeeded and in the first year generated approximately $2 million in additional profits for its members.

The Mississippi Delta escaped the severe damage the boll weevil damage inflicted on other regions of the South due in large part to a combination of biological innovation, advances in modern chemistry, and aviation engineering. The infestation originated in Central America or Mexico and spread into Texas in the 1890s and moved across the South. Louisiana experienced a 75% reduction in cotton production due to boll weevil damage. Approximately

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34 Nelson, *King Cotton’s Advocate*, 18.
35 Ibid., 19.
36 Ibid., 19-20.
one million bales were ginned in the state in 1904; six years later the number had declined to 234,847. The first insects entered the southwest corner of Mississippi in 1907, but did not reach the Delta until the early 1920s. The late arrival in the region worked to the advantage of local cotton farmers who benefitted from a decade of biological innovation in the cotton industry. Between 1911 and 1922 Early Ewing at D&PL and George Walker at the Delta Station successfully bred cotton varieties for early maturity to limit boll weevil damage. The insects caused substantial damage to the 1922 crop, with some estimates calculating losses as high as 80 percent in the region, but the Delta did not experience the years of devastation that plagued their Louisiana neighbors. In his research on Southern agriculture, Pete Daniel found damage across the South “was not uniform, for in the Mississippi Delta the weevil did little harm while in the Black Belt of Alabama and Georgia its destructiveness proved enormous.”

Advances in chemistry accompanied innovations in the seed breeding. In 1918, B.R. Coad at the USDA research station in Tallulah, Louisiana, developed a chemical mixture of calcium and arsenate that proved effective against boll weevils. At the time, the U.S. Air Force operated a small base near Tallulah, and the pilots experimented with aerial application of the calcium arsenate dust to control weevils. Estimates of insect damage around Tallulah between 1920-1934 indicated a 32.2 percent average reduction in damage for areas treated with the chemicals. In 1923, Ewing and a young Englishman, Basil Young, from D&PL traveled to

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39 Olmstead and Rhode, Creating Abundance, 133.
41 Taylor, The Delta Branch Experiment Station, 24.
42 Daniel, Standing at the Crossroads, 12.
43 Olmstead and Rhode, Creating Abundance, 147-49.
45 Olmstead and Rhode, Creating Abundance, 149.
Tallulah to witness a demonstration: “Mr. young and I had our first airplane ride at that time in poison planes.”\textsuperscript{46} He found the results impressive and D&PL immediately implemented aerial crop dusting. Looking back Early Ewing, Jr. claimed the move to aerial application was the “most significant step in insect control…and Delta & Pine land was one of the pioneers. Huff-Deland Company was one of the first airplane dusting firms and we were one of its first clients. After 1928 our dusting work was done by Delta Air Corporation, which soon organized an affiliate, Delta Air lines.”\textsuperscript{47} By the mid 1930s an entirely new business, agricultural aviation, had developed in the Delta.\textsuperscript{48}

\textbf{The British Reaction}

When commodity prices collapsed after the World War I, the British decided it was time to sell their Mississippi cotton plantation. Under the direction of Lant Salsbury the operation paid a dividend only once in 16 years, and to make matters worse, cotton grown in the region proved to be incompatible with the British mills. In 1925 an additional 1000 bales were shipped to England in a final effort to use Delta cotton in the British mills, and once again the experiment failed. British investments in the property included the $3 million purchase price, $1.5 million for improvements and expansion, and additional operating capital with no end in sight. The Fine Spinners decided to cut their losses and moved forward with plans to liquidate their holdings.\textsuperscript{49} Several groups expressed interest including Ford Motor Company, a Japanese firm, the DuPont family, and a group of American investors. But none of the proposals came to fruition and in

\textsuperscript{48} Taylor, \textit{The Delta Branch Experiment Station}, 26-27.
\textsuperscript{49} Nelson, \textit{King Cotton’s Advocate}, 29.
1926 Salsbury turned to Delta attorney and business man Oscar Johnston for advice.\textsuperscript{50} The two men drafted a proposal for a 130,000 acre land corporation scattered across several states and found American investors who expressed serious interest in the deal. In May of 1926 Oscar Johnston traveled to England with an offer and after rounds of negotiations the Fine Spinners—with some hesitation—agreed to sell. The British failed to act quickly to finalize the sale, a few months later cotton prices dropped, and the Fine Spinners missed their opportunity to rid themselves of the property.\textsuperscript{51}

Overproduction was one of the primary causes of the drop in cotton prices in 1926, and ironically, advances in seed breeding, chemical use, and scientific farming methods developed at D&PL contributed to the problem. Ewing’s breeding program produced astounding results; cotton production tripled between 1923 and 1925, topping out at 15,198 bales of cotton.\textsuperscript{52} The plantation had evolved into a modern factory farm, but despite appearances, D&PL failed to turn a profit or supply cotton for the British mills. Thoroughly impressed with Oscar Johnston’s brilliant legal mind and business acumen, the Fine Spinners looked to him for advice. For months he studied the plantation as well as cotton production across the West and into Texas sending recommendations back to England. He developed a plan to reorganize the company’s debts and negotiated payment for back taxes with the federal government. Johnston planned to sail in to England in April to finalize the details for restructuring plantation with the British, but on April 21, 1927, the levee broke just north of D&PL headquarters at Mound Landing, Mississippi. The plantation lay directly in the path of flood the waters. Families were dislocated,

\footnotesize{\textsuperscript{50} Nelson, \textit{King Cotton's Advocate}, 30; Early C. Ewing, Sr., “History of the Delta and Pine Land Company,” 1967.}

\footnotesize{\textsuperscript{51} Nelson, \textit{King Cotton's Advocate}, 29-31.}

\footnotesize{\textsuperscript{52} Nelson, \textit{King Cotton's Advocate}, 32; Early C. Ewing, Sr., “History of the Delta and Pine Land Company,” 1967.}
homes destroyed, and livestock drowned. The property remained covered in water for three months, the entire season lost, and seven hundred tons of seed damaged or destroyed. The British arrived in August to inspect the damage and from that point forward all hopes for selling the property were dashed, but the Fine Spinners decided Johnston would become the next president of D&PL.

Success in the Midst of the Depression

The Great Depression began in the U.S, evolved into a worldwide economic disaster, disrupted commodities market, and shut down international trade. Countries struggled to stabilize their economies and U.S. agriculture took another severe economic blow. American farmers had not enjoyed the prosperity of the 1920s, and circumstances in the state were comparable to others in the region. Historian Pete Daniel found that “Conditions in Mississippi were typical of other Southern states. In 1932, the state was bankrupt, and when Governor Theodore Bilbo left office in 1932 it owed $14 million and had barely a thousand dollars in the treasury.” Delta families were still recovering from an entire production year to the flood in 1927 when, in 1931, the price of cotton dropped to five cents a pound. The Delta Branch Research Station faced closure, and locals pooled their resources to keep the facility operating

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54 Nelson, King Cotton’s Advocate, 38-39; “Biggest Cotton Plantation,” Fortune, 125.
55 Daniel, Standing at the Crossroads, 111.
until federal funding could be secured.\footnote{Bowman, \textit{A History of the Delta Branch Experiment Station}, 21; Taylor, \textit{The Delta Branch Experiment Station}, 91.}

Like many other Americans, Deltans looked to the federal government to take steps to address the economic crisis. Hoping to influence federal farm policy, Oscar Johnston joined the Roosevelt administration as finance director of the Agricultural Adjustment Administration (AAA) in 1933.\footnote{Nelson, \textit{King Cotton’s Advocate}, 46.} Global surpluses of commodities, low prices, and trade barriers wreaked havoc on the US farm economy. The world surplus in cotton alone more than doubled between 1928 and 1933 and foreclosures and bankruptcies spiked.\footnote{Ibid.} In Washington, Johnston and other New Dealers worked frantically to design a program to address the farm crisis. The only viable option for reducing world commodity surpluses was to decrease U.S. production and subsidize farmers for their losses. The success of the program hinged on the cooperation of farmers. Johnston immediately embarked on a campaign to convince producers across the South that they must reduce acreage to force prices up. He traveled extensively and delivered speeches pleading for full support of the AAA reduction program. Johnston announced Delta and Pine Land would cooperate and plant fewer acres and in July of 1993 the tenants at D&PL plowed under acres of cotton in order to meet the acreage restrictions. As president of the largest cotton plantation, it was essential that Johnston provide a model of participation and cooperation for others to follow.\footnote{Ibid.} Desperate cotton farmers saw no other option and joined the program.

The AAA reduction program produced some unanticipated outcomes. Farmers agreed to reduce the number of acres planted, but they adopted intensive production practices and increased the yield per acre—which ran counter to the purpose of the program. D&PL recorded

\begin{itemize}
\item[56] Bowman, \textit{A History of the Delta Branch Experiment Station}, 21; Taylor, \textit{The Delta Branch Experiment Station}, 91.
\item[57] Nelson, \textit{King Cotton’s Advocate}, 46.
\item[58] Ibid.
\item[59] Ibid., 51-54.
\end{itemize}
financial losses for three consecutive years from 1930-32, but beginning in 1933 the plantation prospered even in the midst of an economic depression. Annual reports recorded a loss of $88,000 in 1932. The following year D&PL reported an operating profit of $249,000 and in 1936 profits reached $518,000.\textsuperscript{60} Financial success resulted in unwelcome scrutiny and criticism of Johnston and his British owned cotton plantation. In March, 1937, \textit{Fortune} magazine reported, “Senator Vandenberg sounded off to the effect that New Deal had been paying its fourth-largest benefits for plowing under cotton to a plantation which wasn’t even owned by U.S. citizens but by subjects of the British Empire.” The indictment continued, “Senator Vandenberg took pains to point out that the President of the plantation which was getting this boost was also manager of the New Deal’s cotton pool and the obvious good friend of Secretary Wallace.”\textsuperscript{61} Confident in his actions, Johnston allowed \textit{Fortune} magazine open access to the plantation properties, tenants, and managers. With an obvious pro-business, conservative tone, the article credited D&PL’s success to excellent oversight, “Mr. Johnson runs it with the maximum expertness in cotton management.”\textsuperscript{62} But even under Johnston’s management, D&PL remained in debt. He claimed the company held assets worth $5 but carried $5.2 million in debt.\textsuperscript{63}

Government subsidies contributed to the plantation’s success, but biological innovation was also an important factor. Ewing’s superior seed varieties, combined with a comprehensive fertilizing program and meticulous attention to insect control produced astounding results. At the time, the average cotton yield per acre in the U.S. was 187; D&PL harvested 638 pounds per acre. The same was true of seed—D&PL produced over 900 pounds per acre with the U.S.

\textsuperscript{60} “Biggest Cotton Plantation,” \textit{Fortune}, 132.

\textsuperscript{61} Ibid., 125.

\textsuperscript{62} Ibid., 125, 128-132.

\textsuperscript{63} Ibid., 126.
average around 600 pounds. The cotton seed industry on its own qualified as a lucrative business. In 1936, D&PL earned $463,000 from the sale of cotton and $120,000 from the sale of seed to the domestic and international market. The caption next to a photograph in Fortune describes Ewing as “Delta & Pine’s seed culturist, whose quality cottonseed gives the company the biggest seed sales of any producer in the world.” In 1936, D&PL sold 3,500 tons of planting seed and with seed sales in the U.S. China, Greece and Argentina, enough to plant 140,000 acres. Ewing’s earnings from his salary and commission combined that year totaled $4,150.

The global economic crisis set off another wave of boosterism in the region. A group of influential farmers and business leaders established the Delta Chamber of Commerce, later renamed the Delta Council, and launched a campaign to create the National Cotton Council to represent the interests of the U.S. cotton industry. Federal crop reduction plans failed to solve the problem of global cotton surpluses, and it seemed the only alternative would be to increase consumption in order to drive prices up and remain competitive global market. But an effort on this scale required cooperation beyond the local level. In the late 1930s, Johnston and other leaders in the cotton industry believed the only way to gain more political power and influence federal farm policy was to unite cotton producers across the country into a powerful industry-wide lobbying group. Speaking at a convention at the Peabody in 1937, Johnston told the crowd, “…if the South is to be saved from economic ruin it must organize, organize, organize.”

The third annual meeting of the Delta Chamber of Commerce offered a forum for

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64 Ibid.
65 Ibid., 158.
66 Oscar Johnston quoted in Nelson, King Cotton’s Advocate, 182; additional information on the events leading up the founding of the National Cotton Council, Nelson, King Cotton’s Advocate, 193-196.
presenting the idea for a national organization to a large group of industry leaders. Headquartered in offices at the Delta Station, the Chamber held a meeting each year on the campus of Delta State Teachers College in Cleveland, Mississippi, a small town a few miles north of D&PL headquarters. An immense amount of energy went into planning the event. Johnston and Chamber members agreed they needed a speaker who would emphasize the importance of international trade. They had hoped to convince the secretary of state to appear, but settled for Dr. Frances B. Sayre, Assistant Secretary of State, former Harvard professor, and a supporter of reciprocal trade. On June 15, 1938, representatives from every segment of the cotton industry attended the meeting:

The invitation list boasted the big shots, … Governors and other political leaders would mingle with planters, commissioners of agriculture, news editors, leaders of interest groups, and most important, representatives of the five major segments of the American cotton industry—producers, merchants, warehousemen, giners and cottonseed crushers… By train and automobile, hundreds of members, delegates, and guests converged on the little teachers’ college…The former Harvard professor, in his dark suit and starchy collar proving he was no southerner, performed very ably, his speech carefully honed to meet the thirty-minute national air time over NBC’s New York Red Network… Sayre urged the industry to take steps to protect its future…

With over a thousand in attendance, some estimated as many as three thousand, the meeting was a success for Johnston and Delta boosters in their campaign to form a national cotton coalition. In the months that followed, the Delta Chamber provided funds for boosters to travel across the country to gather support for a national organization. In November industry leaders met at the Peabody Hotel in Memphis marking the official founding of the National Cotton Council.68

The economic crises that catalyzed the white community in the 1920s and 1930s also brought changes to race relations in the Delta. Prior to the Depression, economic stress

67 Ibid., 194.
68 Ibid., 201-202.
heightened racial tensions, but for a number of reasons the trend shifted in the 1930s. According to historian Charles Payne, the failing cotton economy that undermined the economic foundation of the region contributed to a decline in racial violence when whites no longer needed to maintain strict control of the predominantly Black labor force “either through the near-peonage of sharecropping or through violence.” 69 Statistical evidence indicates a significant decline in documented lynchings after the turn of the century. Payne drew a direct correlation between the drop in racial violence and the price of cotton: “Prior to the turn of the century racial lynchings across the South averaged around one hundred a year. Between 1900 and 1920, they fluctuated between fifty and seventy. In 1935, after the arrival of nickel-a-pound cotton, the number dropped to eighteen, and for the next twenty years it would not rise above eight in any one year.” 70

The threat of federal action and economic pressure on small town merchants contributed to a shift in racial attitudes in the Delta. Acts of violence committed against Blacks declined each time Congress considered passing a federal anti-lynching law, first in 1923 and again in 1934 and 1935. Another call for an anti-lynching law came in 1938 and during the first half of the year, while Congress deliberated, no lynchings occurred in any Southern state. At mid year the violence resumed with four lynchings in Mississippi, one in the Delta, and a total of seven in the South. 71

In the 1930s, small business owners in the Delta realized economic survival depended on widening their customer base. In her study of Sunflower County in the 1930s, Hortense

70 Ibid.
71 Ibid., 9-10.
Powdermaker found white merchants treated valuable Black customers with more respect during the depression years: “Negro customers were no longer kept waiting indefinitely for attention. In many cases, they were permitted to try on garments rather than, as before, being required to buy shoes, gloves, hats, without first finding out whether they were the right size or shape.” While there were visible changes taking place in the racial structure in the Delta during the 1930s, the truly transformative challenges to the segregationist society lay ahead.

**Conclusion**

The Mississippi Delta was deeply embedded in the global market during the early twentieth century. Agriculture—and particularly cotton—had always been an international industry spanning the globe, and fluctuations in market prices reverberated in the Delta, impacting producers and rippling out to bankers, suppliers, merchants, and tenants—the entire regional community. Two world wars, a global economic depression, and the transnational boll weevil infestation left the region with an economy constantly in turmoil and with no time to recover between crises. When the flood destroyed a large swath of the Mississippi Delta in 1927, it crippled an economy already teetering the edge.

Delta landowners and businessmen embraced the progressive rhetoric of efficiency, scientific knowledge, expertise, and technology and shaped the ideology to fit their agenda. They joined the crusade for cooperatives and associationalism and organized at the local and national level to influence federal farm policies and trade agreements. By the end of the 1930s Delta producers had engaged in more than two decades of network building and support systems in place—all of which benefitted the business elites and large producers to disproportionate degree

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72 Ibid., 21.
over Blacks and poor whites in the region. For better or worse, the region emerged from the 1930s with a stronger relationship with the federal government and was the beneficiary of a controversial system of subsidized agriculture with all the political, economic, and social complications it entailed.

Locals employed the most advanced science and technology to build a system of highly efficient science-based agriculture. With the support of federal and state institutions, Deltans established a tradition of scientific and biological innovation in agriculture that helped launch the Green and genetic revolutions in the future. And even more importantly, the local agricultural community created a network for exporting American style agriculture to the world in the latter half of the century. Nor were Deltans out of step with the intellectual, ideological, and cultural trends of the period. Unfortunately, scientific racism, the belief in white superiority, and Social Darwinism that permeated American society—and much of the rest of the developed world—served to validate the racist ideology in the region. As historian Chris Myers Asche noted, “Within the context of the late nineteenth century, the racial hierarchy in the Mississippi Delta was not backward or anachronistic at all—it was on the cutting edge of Western culture.”

Those who belonged to the business elite and planter class in the region were keenly aware of the broader forces shaping their world, but shifts in international markets and international conflicts most profoundly impacted Deltans who—for whatever reasons—remained disconnected from world affairs and global economic. World War II brought a brief period of prosperity to the region, and the postwar years led to increased internationalism among Delta elites who capitalized on a shift in U.S. foreign policy to explore opportunities abroad and

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suppress the Black activism at home.
CHAPTER III
COLD WAR CAPITALISM

“The United States must take world leadership and quickly, to avert world disaster… We must all go out in this world game or we’d better stay home and devote our brains and energies to preparation for the third world war.”
Will Clayton, State Department Official Memorandum, 1947

“I would argue that globalization is more than a macrolevel phenomenon. Globalization is also a concrete series of actions, initiatives, and decisions made by human beings within the organizations they have invented… Globalization in our world is occurring because people actively create it, nurture it, and promote it.”
Jeffrey T. Jackson, Sociologist, 2005

On May 8, 1947, Under Secretary of State, Dean Acheson delivered the keynote address at the annual Delta Council meeting on the campus of the Delta State Teachers College in Cleveland, Mississippi. President Truman had been scheduled to appear, but decided to send Acheson in his place. Leaders of the organization expected a statement on postwar foreign policy and Acheson took the opportunity to test public support for a $5 billion aid package to rebuild Western Europe. But even as he spoke no clear plan of action existed. Acheson’s colleague, Will Clayton was in Europe assessing deteriorating conditions across the continent, sending daily cables back to the State Department with urgent requests for immediate intervention while

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General Marshall’s staff at the State Department struggled to draft a plan to address the sheer magnitude of the destruction the war caused. According to Acheson, only “when Clayton returned from Europe with a memorandum written on the plane, did a concrete outline for the Marshall Plan emerge.” In his memoirs, *Present at the Creation*, Dean Acheson commented on the origins of General Marshall’s Harvard speech explaining the necessity of massive U.S. aid for Western European. He recalled the “powerful effect of a second memorandum of my colleague, Will Clayton, had written on his flight home from Geneva, upon General Marshall’s thinking and framing of his proposal.” Acheson wrote that when he saw the draft of Marshall’s speech, it was clear more than over half of the text “came straight from the two Clayton memoranda.”

Recruited to serve in the Roosevelt Administration to organize the procurement of overseas materials during the war, Clayton possessed decades of accumulated knowledge of the global market system, a complex blend of international financial institutions, transportation systems, storage facilities, and transnational supply chains. He knew where to locate raw materials and how to facilitate the movement of supplies efficiently from one continent to another through a network or global contacts he cultivated throughout his career. In the final months of the war, Clayton moved to the State Department to work on postwar foreign economic policy. When Will Clayton died of a heart attack in the 1966, former President Harry Truman sent condolences to his family. Clayton, he wrote, was “one of those rare public servants who was not only dedicated to the public’s interest but had a world outlook in which he saw the

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5 Ibid.
position of the United States in relation and harmony to all nations.” Truman assured Clayton’s family his public service would be remembered: “His work for world cooperation in peace constitutes an enduring monument for which history will inscribe his name in bold letters.”

Who was this man, recognized among his contemporaries as one of the primary architects of post World War II U.S. foreign policy, whose name has since been forgotten? Will Clayton, Chairman of Anderson, Clayton & Company, was the largest cotton trader in the world.

A significant portion of George Marshall’s Harvard speech focused on the breakdown of agricultural systems in Western Europe, with multiple references to the farmers of Europe, and as a new world order emerged, agriculture became a cornerstone of postwar U.S. foreign policy.

This chapter explores the ways in which Delta elites, with the institutional support of federal and state agencies, actively facilitated the export of American style agriculture to nations around the world. Cloaked in postwar internationalism, Delta elites focused outward. They merged U.S foreign policy with economic prosperity and became Cold War capitalists promoting international development while refusing to address the devastating poverty and social and political injustices in their own communities. According to Clayton’s biographer Gregory Fossedal, “Building a new world economy was the chief issue that interested Clayton in the closing days of World War II. For him, the two spheres of freedom, economic and political, could not be neatly separated. Free trade would promote democracy, and democracies would allow the flow of people, ideas, and goods to remain free.”

But economic and political freedom in the new world order of the Cold War years had different meanings for different groups in the

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6 Fossedale, *Our Finest Hour*, 286, 221-224.
7 Ibid., 25.
9 Ibid., 107.
Mississippi Delta.

**The Postwar Delta**

The economic problems that plagued the Delta in the 1930s continued to impact the region in the postwar years. According to historian Gilbert Fite, the U.S. farm economy prospered in the early 1940s, “but cotton’s future at the war’s end did not appear bright. Indeed, farmers, ginners, bankers, and others who depended on cotton viewed the situation with alarm.”\(^{10}\) Wartime domestic demand for cotton drove prices up and kept profits margins high, but when the conflict ended farmers faced increasing competition in the international markets from foreign producers in China, India, and Latin America. To make matters worse, in the 1940s synthetic yarns increased in popularity and captured more than 10 percent of the fiber market—with greater increases expected in the future.\(^{11}\) In 1911, the U.S. provided 72 percent of the world’s cotton supply. Thirty years later the nation’s share in the global market had dropped to 38 percent.\(^{12}\) In other words, World War II provided only a brief disruption to a steady decline in U.S. dominance in the global market since the turn of the century.

The impact of the postwar technological revolution and subsequent dislocation of labor in the postwar Delta has been well documented, but a few statistics are worth noting. In 1944 a demonstration of the efficiency of mechanization at Hopson Plantation near Clarksdale projected an estimated reduction in labor inputs for 200 acres of cotton from approximately 600 to 700 workers to 40 wage workers to operate a fully mechanized farm.\(^{13}\) Historian Jack Temple

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\(^{11}\) Ibid., 164-165, 175.
\(^{12}\) Ibid., 175.
\(^{13}\) Ibid., 169-170.
Kirby’s study of southern agriculture highlighted the impact of the technological revolution in the region: “In twenty rapidly mechanizing Mississippi delta counties between 1949 and 1952, employment of unskilled agricultural labor dropped by 71 percent.”

Between 1950 and 1960, statistics show outmigration rates from 6.7 percent to as high as 28.5 percent in ten counties in the Delta. In the postwar years, thousands of Deltans found themselves with no viable opportunities for employment.

Postwar economic stress exacerbated the deep-seated racism in the Delta and led to a new era of racial oppression, violence, and injustice. White attitudes hardened as a renewed spirit of activism galvanized Blacks in the Delta – many of them war veterans. Economic and political freedom for white Deltans meant white control of power and resources in the region. A sign of the increasing racial tension came in 1948 when the Delta Council, an all white coalition of Delta elites, felt the need to form a “special committee” and print a public statement of the organization’s position on race relations:

Delta Council approaches the problems of race relations with the full realization that neither legislation nor mutual planning can meet all of the issues. Further, we realize that the problems are so vast they cannot be corrected in any short period of time. We believe that in thinking of ways to bring about better education and economic opportunities for the Negroes of our state, people here and abroad must realize that the lack of intelligent and thrifty incentive on the part to the mass of Negroes to plan wisely for themselves is the greatest problem confronting the people of Mississippi in their desire to do more for its Negro population… We think a close analysis of the Negro progress in our section will reveal that for those who have put forth a reasonable effort to become worthwhile citizens, their right to vote and their educational opportunities have improved faster that any other people in history. But even with this improvement in his status, his leaders and our leaders need to instruct him in the civic responsibilities regarding law enforcement, tax paying, the preservation of property, the value of saving and the importance of putting

forth his best effort. Until these qualities mean more to him as a citizen, no fair-minded person can disagree with our determination to keep the ballot of our state as far as possible in the hands of stable, qualified, conscientious, citizens. To change this principle would mean ruin for both the white and the Negro people.¹⁷

The Council’s statement concluded with a commitment to maintain a racially segregated society:

“Since the question of separate churches and separate schools and separate public accommodations frequently causes critical comment in other areas, we state our position as follows: We believe in segregation because we believe it is best for the Negro and best for ourselves and in the interest of public welfare.” A list of ten committee members appeared directly under the statement and Hodding Carter’s name was among them. A Pulitzer Prize winning newspaper editor from Greenville, Mississippi, many of Carter’s contemporaries considered him a progressive on the issue of race relations. To be fair, Carter may have been a dissenter on the committee, but the following year the statement in the annual report on race relations had a much more nuanced and diplomatic tone and listed only the name of the chairman of the committee.¹⁸

Agricultural Innovation and Collaboration

As in much of the rest of the nation, the postwar years in the Delta were a time of anxiety and exuberance. Energy and excitement infused the American scientific and engineering communities and federal funding for agricultural research increased. In the Delta the collaborative relationships formed between public and private agricultural institutions in the early part of the century intensified in the postwar years. Local, state, and federal tax dollars

¹⁸ Delta Council, Annual Report, 1949-50, 14, Delta Council Collection, Charles W. Capps, Jr., Archives and Museum, Delta State University, Cleveland, Mississippi.
supported new and expanded lines of research at the Delta Branch Research Station as the focus shifted to precision agriculture for maximum yield with the lowest production costs to remain competitive global commodities market. According to Delta Station historian Amy Lipe Taylor, “Intensive research began in very area of cotton production. The new cotton physiology department, along with cotton breeders and geneticists, conducted experiments on new varieties, planting techniques, and cotton defoliation. … The mechanization department continued to work tirelessly on discovering the best methods in every step of cotton production.”19 The Station and private seed breeders continued to exchange germplasm developed at both public and private facilities for seed breeding. In 1960, Early Ewing, Jr. of Delta and Pine Land explained the benefits shared breeding material between plant breeders in the Delta: “Today we are also using to a very large degree the fundamental breeding materials developed by state and federal agencies… Dr. Meyer at Stoneville has provided us with pollen from… lines the USDA brought from Africa.”20 Shared plant material allowed each institution or business to get new varieties out to farmers as quickly as possible to adapt to new disease, weed, or insect problems in the region.

The federal government encouraged farmers to diversify during the war and soybean acreage increased in the Delta. In the 1940s the USDA partnered with the Delta Station and formed the Southern Regional Soybean Project that encompassed a twelve state region with headquarters in the Delta.21 In addition to expanding the soybean production, Deltans introduced

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19 Amy Lipe Taylor, The Delta Branch Experiment Station: 100 Years of Agricultural Research, ed. James W. Smith and Charles E. Snipes (Starkville, MS: Mississippi State University, 2004), 56-57.
33.
21 Fite, Cotton Fields No More, 165; Taylor, The Delta Branch Experiment Station, 48.
an entirely new commodity, rice, to the region after the war and within a decade there were 70,000 acres in rice production in the region.\textsuperscript{22} The widespread adoption of chemicals in agriculture transformed the industry. Chemical companies moved to the Delta near the Station and established test plots. They worked with engineers and scientists to develop equipment for chemical application and conduct field trials on new chemicals as they were introduced to the market.\textsuperscript{23}

**International Collaborations**

The reciprocal relationship between D&PL, federal and station agencies, and agribusinesses along with international contacts established through the British placed the company in a unique position as a clearinghouse gathering and disseminating the latest advances in science-base agriculture. A recognized leader in modern agriculture, D&PL attracted national and international attention the postwar years. After World War II, the company garnered more exposure when it gained dominance in the domestic seed market. Deltapine cotton varieties set the standard for high quality seed in the U.S. and expanded sales into foreign markets. Breeders developed improved cotton, soybean, and rice varieties, and commercial seed sales became the primary business of the company.\textsuperscript{24} In 1947 D&PL reported a U.S. market share of 28.7 percent with their closest competitor claiming 15.3 percent, and in southern states over half the cotton acreage was planted in D&PL varieties.\textsuperscript{25} For years, the company only sold seed grown on its property, but by the late 1940s D&PL could no longer produce enough seed to supply their

\textsuperscript{22} Taylor, *The Delta Branch Experiment Station*, 56-57.
\textsuperscript{23} Ibid., 34.
market and turned to contract growers—large producers paid to grow D&PL varieties for commercial sale. The company supplied the seed and after the cotton the harvest farmers returned the seeds to Scott for processing, treatment, packaging and distribution. In order to control seed quality, D&PL preferred to work with large producers, which gave them advantage over small operators.\textsuperscript{26} In the 1950s, the majority of cotton in the South was grown from just ten varieties of cotton with Deltapine 15 the first choice among farmers.\textsuperscript{27}

The company’s reputation led to an increase in visitors and requests for information. People traveled from all over the world to Scott where they toured the research and processing facilities, observed crops in the field, and consulted with the staff.\textsuperscript{28} For example, in the spring of 1950, seed dealers from Mexico arrived to discuss forming a partnership with the company, later that year D&PL welcomed a plant breeder and ginning engineer from Belgium, and in 1956 company hosted six guests from Mexico.\textsuperscript{29} The following year, prior to the arrival of a group from Brazil, a company memorandum explained the purpose of upcoming the visit: “These gentlemen have been sent by the Brazilian State of Sao Paulo for a two month, self-financed study mission in the United States to study all phases of cotton production.”\textsuperscript{30} In September of 1960, Ewing received a handwritten request from Turkey to visit Scott and a date was set for later that fall.\textsuperscript{31} And in 1962 an official representing European cotton merchants and textile

\textsuperscript{30} Early C. Ewing, Jr., memorandum to company officials, August 9, 1957, Series 9/ Box 32, Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries.
\textsuperscript{31} Letter to Early C. Ewing, Jr., from (name indecipherable) Turkey, September 20, 1960, Series 8/ Box 32, Delta
manufacturers wrote to thank Ewing for the hosting one of his colleagues from France.\textsuperscript{32}

Many of the letters and telegrams that arrived at D&PL contained requests for information. In 1954, Ewing exchanged correspondence with, John Spencer, a researcher in Antigua writing for advice regarding chemicals and machinery.\textsuperscript{33} In September of the following year, he replied to a letter from Holland asking for a description of cotton varieties developed at D&PL and asked a favor in return: “We would be very interested in hearing from you about the cotton situation in Israel. We understand that some of our varieties are being grown there.”\textsuperscript{34} Ewing sent a list of suggested readings and textbooks on cotton production to an Iranian student attending school in Ohio.\textsuperscript{35} In 1963, the director of the National Cotton Council forwarded an inquiry from Alonzo Curtis in Switzerland to D&PL. Curtis needed information on the cotton delinting process and the name of a manufacturer for equipment to ship to partners in India.\textsuperscript{36} Ewing sent a detailed response and contact information for the company that supplied D&PL’s equipment: “To my knowledge the setup which we have is by far the most modern and thorough in existence anywhere.”\textsuperscript{37} Curtis wrote to thank Ewing and expressed concerns about sharing the technology with India:

Thank you very much for your letter… Frankly, I had no idea at all of the importance of this process … It is indeed a fascinating situation and I am certain that India stands to

\textsuperscript{32} French official, letter to Early C. Ewing, Jr., June 29, 1962, Series 8/ Box 32, Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries.
\textsuperscript{33} John Spencer, letter to Early C. Ewing, Jr., August 18, 1958, Series 8/ Box 37, Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries.
\textsuperscript{34} Early C. Ewing, Jr., letter to contact in Utrecht, Holland, September 9, 1963, Series 8/ Box 32, Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries.
\textsuperscript{35} Early C. Ewing, Jr., letter to Oscar G. Sappington, March 5, 1958, Series 8/ Box 32, Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries.
\textsuperscript{36} Claude Welch, letter to Alonzo Curtis, Basel Switzerland, December 6, 1963, Series 8/ Box 32, Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries.
\textsuperscript{37} Early C. Ewing, Jr., letter to Alonzo Curtis, Switzerland, December 9, 1963, Series 8/ Box 32, Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries.
gain tremendously, a thing I hope does not dislocate our industry. For better or worse, nevertheless, I have forwarded your information to our Indian partners…I must say that it is very refreshing to receive such detailed, interesting and excellent information on the basis of a simple request.\textsuperscript{38}

Government sponsored international exchange programs with an emphasis on agricultural development increased during the Cold War years. In collaboration with the USDA, land-grant universities, and the research station, D&PL offered a three-month long summer seed improvement course for international students studying agriculture and professionals working in the field. The class roster in 1956 included participants from nine countries: Spain, Paraguay, Philippines, Israel, India, China, Ecuador, Greece, and Guatemala. In 1958, 15 students enrolled in the course: six from Indonesia, two from Guatemala, and one each from Ceylon, Costa Rica, Cuba, Korea, Pakistan, Thailand, and Turkey, and records indicate additional sessions took place in 1959 and 1961.\textsuperscript{39} In addition to the seed improvement courses, for a period of time D&PL, Delta Council, and the Station hosted a group of exchange students each year from Vanderbilt University enrolled in the graduate courses in economic development. The list of participants in 1961 included students from Pakistan, Brazil, Italy, Thailand, Taiwan, Indonesia, Libya, Egypt, Nigeria, Iran, Columbia, Ecuador, Philippines, Israel, Malaya, Turkey, and Korea. Many worked in government positions in their home countries. Professionals enrolled in the course in 1961 included:

Senior Economist, Economic Planning Organization, Manila
Government Official in Revenue Department Ministry of Finance, Bangkok
Economist, Ministry of Agriculture, Tel-Aviv


International agricultural exchange programs during the period often involved scientific collaborations between the U.S. agricultural community and scientists in other countries. In 1963 D&PL considered expanding seed sales into Australia and Bill Raney, Chief Soil Physicist for the USDA, sent Ewing a list of international scientists that could be brought to the US on a one-year exchange program. At the time Raney believed there were “more outstanding soil scientists in Australia than perhaps any other country in the world.” The document listed 17 scientists from Australia, along descriptions of their areas of expertise, and 20 more from nine other countries. The impressive roster included experts on moisture flow, photosynthesis, soil-microclimatology, a “world authority on water-plant relationships,” a mathematician and soil physicist from Cambridge University, and an “outstanding scientist of world-wide renown and one of the world’s foremost authorities on biochemistry” of soil microbes from the Netherlands. The global world of science-based agriculture became more compressed and collaborative during the Cold War years with state facilitated transnational exchanges of information, ideas, and technology.

**Exporting American Agriculture**

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At mid-century, D&PL enjoyed a broad international network of contacts and information, and the company began to explore opportunities for expansion in foreign seed markets. The company adopted intensive production methods in the 1930s, and with the plantation at maximum yields per acre international seed sales offered a way to increase revenue. By 1957 cotton producers in several Latin American countries had successfully grown D&PL varieties. The company sold 220 tons to Paraguay the previous year, seed trials were underway in Columbia and Nicaragua, and Deltapine varieties produced positive results in San Salvador and Guatemala. The company had an established presence in Mexico through dealers in Louisiana who sold D&PL seed to local distributors in the country. Other reports indicated the company’s seeds had been used for years in Argentina and Paraguay. In the summer of 1957, Ewing sent letters of inquiry to the Argentina, Brazilian, Peruvian, Paraguayan, and Columbian Consulates in New Orleans requesting information on the state of the cotton industry in each country and requirements for acquiring visas.

The company established contacts in Latin American countries prior to the war, most likely through the British who traded in the region, and during the war years, D&PL engaged in dual hemisphere seed breeding, also known as shuttle breeding, to reduce the time required to develop new varieties. In 1944, Early Ewing, Sr. reached out to his contacts in Latin America with a proposal: “I arranged with three acquaintances in Argentina, Brazil, and Peru to plant and grow some of the seed ... The hybrid seeds were flown South as soon as they matured here.”

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44 Early C. Ewing, Jr., letters of inquiry to consulates, July, 1957, Series 8/ Box 37, Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries.
Collecting the results of two field trials per year allowed Ewing to significantly reduce the time to produce a new variety, which on average took about ten years.\textsuperscript{46} Other breeders soon followed suit. Shuttle breeding was later credited to Norman Borlaug, winner of the Nobel Peace Prize and father of the Green Revolution. Beginning in 1946, Borlaug used dual hemisphere production to speed up his wheat breeding research in Mexico. In his biographical study of Borlaug, Leon Hesser credited the innovation in breeding to Borlaug: “It had not been tried before: two generations each year instead of one, plus a complete switch from one latitude and altitude to another. This concept flew in the face of traditional plant breeding methods.”\textsuperscript{47} Ewing and Borlaug may have developed the idea independently, or perhaps in collaboration with others scientists, but regardless of its origins, dual hemisphere breeding gained widespread acceptance in the international scientific community.\textsuperscript{48}

Demand for D&PL seed in Mexico increased after World War II. The number of bales of cotton grown in the country nearly tripled from 334,000 in 1939 to 900,000 in 1949, and company officials considered partnering with contract seed producers in Mexico to supply the market. Representatives from D&PL traveled to Mexico several times in the 1950s to seek out viable partners but continued to supply the region through distributors in Louisiana and Texas.\textsuperscript{49} During one of his trips to the Mexico Ewing met Norman Borlaug, the world-renowned wheat breeder and future recipient of the Nobel Peace Prize. When he returned to the states Ewing wrote to thank Borlaug, “We certainly do appreciate the help and advice which you gave us

\textsuperscript{48} Ibid., 41-54.
\textsuperscript{49} Early C. Ewing, Jr., memorandum to C.R. Sayre, President, D&PL, October 9, 1950, Series 8/ Box 37, Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries.
during our recent visit to Obregon. We, also, found your wheat work to be most interesting.” In 1959 the company set up a Western Division to serve the growing market in California and Arizona, and the threat of completion forced the company to expand its presence in Mexico. A report from Scott to the Fine Spinners & Doublers in England explained the situation: “With Coker and Stoneville in production in Mexico, we are pretty sure that we will have to start producing seed in Mexico by 1961… I believe we will be soon be out of business down there unless we prepare to produce seed there.” The decision to expand in country boosted company sales in the country; as a result, D&PL remained the primary supplier of seed to Mexico with 66 percent share of the market in 1963 and 69 percent in 1969.

In the 1950s, Brazil offered the greatest opportunity for large-scale expansion for U.S. agri-businesses. Brazilian cotton production increased during the war, but declined in the decade that followed. The industry had failed mechanized and laborers often planted food crops between rows of cotton. Brazilian cotton farmers experienced crop losses to insect and disease damage and cotton yields per acre in Brazil dropped to the lowest in the Western Hemisphere. In comparison, El Salvador, Guatemala, and Nicaragua, and Mexico doubled their yields during the same period. D&PL sent a representative, Ted Stephens, to survey conditions in the country and the possibility of establishing a seed distribution system in Brazil. In a letter to Ewing Stephens reported that “cotton had run out completely in Sao Paulo and the entire industry will

50 Early C. Ewing, Jr., letter to Norman E. Borlaug, Obregon, Mexico, March 18, 1961, Series 8/ Box 37, Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries.
have to be rehabilitated by securing a new supply of seed and the cotton firms are of the opinion that Deltapine 15 is the preferred variety.” Stephens also suggested the Brazilians would need a breeder from D&PL to oversee the production of planting seed in Sao Paulo. Brazil was an untapped market. Ewing drafted a plan for building a seed program in the country, and with the cooperation of the USDA, arranged to host a group of Brazilian officials later that year in Mississippi. The three-month long trip included scheduled stops at Mississippi State College, and the research station, Stoneville Pedigreed Seed Company, and D&PL. After the Brazilians visited Scott in August, the company shipped nine Deltapine varieties for field trials to country, but when fiber samples arrived in the U.S. a year later tests results proved disappointing. Efforts to expand in Argentina in the 1950s met with the same results but field trials in Nicaragua were successful and in April 1957 Ewing replied to a request for an additional 200 pounds of Deltapine seed.

Expanding Beyond Latin America

With the a seed sales network established in Latin America, D&PL opened new markets in Australia and South Africa. Ewing visited the Ord River Valley in Australia in the summer

55 R.B. Driver Letter and group itinerary to Early Ewing, Jr., April 20, 1957, Series 8/ Box 37, Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries.
57 Early C. Ewing, Jr., letter to R.B. Driver on samples from field trials in Argentina, June 6, 1957, Series 8/ Box 37, Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries.
59 Early C. Ewing, Jr., “Correspondence on Australia,” 1963, Series 8/ Box 37, Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries.
of 1963 and immediately recognized the potential for commercial seed sales in the area.\textsuperscript{60} The region remained relatively unsettled, had a plentiful supply of water, no restrictions on cotton acreage, and the Australian government allowed established producers to purchase land for $2.24 per acre.\textsuperscript{61} At the time, California cotton farmers had been moving to Australia for more than two years, and locals voiced their concerns about the quality of seed available in the country.\textsuperscript{62} In mid summer, D&PL planted test plots and recruited partners for seed production and distribution.\textsuperscript{63}

Both Australia and South Africa restricted the importation of large quantities of seed; therefore, partnerships with seed companies in those countries provided the only avenue for expansion.\textsuperscript{64} In 1966, company executives at D&PL outlined a proposal for a joint breeding program with Gunson Seed in South Africa, and in March the companies reached an agreement.\textsuperscript{65} Two years later, a plant breeder at the Gatooma Research Station in Rhodesia, Fred Gillham, wrote to Ewing suggesting mutually beneficial program of seed increases in the southern hemisphere. Gillham explained he and his staff had tested a plot of Deltapine Smooth Leaf variety the previous year with good results: “We visualize that if this Double selection pressure can be applied each year it will be of considerable benefit both to you and to ourselves

\textsuperscript{60} C.E. Court, Minister of Industrial Development, Perth, Australia letter to Early C. Ewing, Jr., on travel arrangements for the trip, May 16, 1963, Series 8/ Box 37, Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries.

\textsuperscript{61} Early C. Ewing, Jr., Letter to Tom Jepsen, July 2,1963, Series 8/ Box 37, Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries.


\textsuperscript{63} Norm Thomson, Kimberly Research Station, Kununurra, Western Australia, Letter and report to Early C. Ewing, Jr., July, 1963, Series 8/ Box 37, Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries.

\textsuperscript{64} Early C. Ewing, Jr., memorandum to Minor S. Gray, February 14, 1966, Series 8/ Box 30, Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries.

\textsuperscript{65} Handwritten outline of business arrangement with Gunson Seed, 1966, Series 8/ Box 38; Early C. Ewing, Jr., letter to A. W. Kreutser, Johannesburg, South Africa, March 14, 1966, Series 8, Box 38, Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries.
once some agreement can be entered into on obtaining a regular supplies of seed from you from for multiplication and production in this part of the world.” He alluded to the potential for future expansion across southern Africa: “I do not limit my remarks to Rhodesia because I feel that a far bigger geographical area could be involved.”  

At the end of the decade, D&PL had distributors in all cotton growing states in the U.S. and several foreign countries, and between 1957 and 1966 foreign seeds sales made up as much as 30 percent of D&PL’s commercial seed business. During the 1965-66 season, the company shipped 621 tons to Mexico, 491 tons to Nicaragua, and 441 tons to Columbia. In five of the ten years prior to 1968, D&PL seed sales exceeded the income from the sale of cotton.  

Conclusion

The British had solicited buyout offers for Delta and Pine Land for decades and in 1964, the Fine Spinners & Doublers sold to their American cotton plantation to another British firm, Courtaulds Limited of London, a manufacturer of synthetic yarns. The company wanted access to the Fine Spinners’ textile mills and agreed to purchase D&PL as part of the deal.  

In the postwar years, Delta elites engaged the international agricultural and scientific communities and facilitated the exchange of goods, ideas, and technology. Local actors opened up global markets and drew internationals to the Delta, a hub of scientific and biological innovation. Deltans promoted economic development and democracy abroad but denied their own citizens the same rights and opportunities at home. But broader forces also contributed to

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growing inequality in the Delta, the most significant and least visible, the international commodities market, served to increase economic stress in the region. But the region was not unique in the changes it experienced in the postwar years. Economic inequality, rural decay, federal policies, and intense global competition continued to shape and reshape the local economy.

In 1968, after more than fifty years at Delta and Pine Land, Early C. Ewing, Sr. made an prescient observation: “It is noticeable that there is greater awareness of the importance of the research work and the planting seed features of the business by our present officers than in any preceding period.” 69 Science and technology influenced agriculture to an unprecedented degree in the years that followed when researchers introduced genetically modified organisms to the industry. In the latter part of the twentieth century, Delta entrepreneurs and scientists played a central role in exporting biotechnology to other countries, which radically transformed global agricultural production.

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69 Ibid.
CHAPTER IV
THE SILICON VALLEY OF AGRI-RESEARCH

“Genetically engineered organisms are the latest element of a continuing process by petrochemical and pharmaceutical companies to control the world economy. It is a system based on agro-tyranny.”
–Tom Evans, addressing the “Big Money, Bad Science” teach-in, in Vancouver, British Columbia, Canada, 10 November 2000.¹

“Biotech was God’s way of reminding cotton farmers that the world of genetic science was about to pass them by in a nanosecond unless they caught this midnight express to the future. They did…."
- Stephen Yafa, author of Cotton: The Biography of a Revolutionary Fiber, 2005²

In 1972, Mwananyanda Lewanika, an African prince and seventh son of the King of the Lozi people of Zambia, enrolled in courses at Jackson State University, the largest of Mississippi’s six historically black colleges and universities. He arrived in the U.S. just two years after police shot and killed two student protesters on campus and one year after publication of the Pentagon Papers. In the early 1970s, the nation remained deeply divided over the Vietnam War, school desegregation, civil rights, environmental issues, political power, and cultural values. Over the next decade, Lewanika earned three degrees: a bachelor of science from Jackson State along with a Masters degree and a PhD in chemistry and biochemistry from the University

of Southern Mississippi. Lewanika’s older brother and sister also earned multiple degrees from American universities.³ The Lewanikas were among a growing number of international students who came to the United States in the decades following World War II when support for foreign exchange programs increased as a way to strengthen relationships with other nations. New economic models indicated U.S. aid, expertise, and technology could provide a foundation for sustained economic growth and political stability in developing nations. The Kennedy administration embraced the development models and established the Peace Corps, Alliance for Progress, and Agency for International Development (USAID).⁴ Presidents Kennedy and Johnson both called for expanding and funding international cultural, humanitarian, and educational exchange programs as part of postwar U.S. foreign policy.⁵ In addition to federal


⁴ Economist Walt Whitman Rostow served as an advisor to Presidents John F. Kennedy and Lyndon Johnson. Rostow, along with fellow academicians, developed economic models indicating U.S. aid to developing countries would lead to political stability and sustained economic growth. Rostow’s theories contributed to the establishment of agencies like the Peace Corps, the Alliance for Progress, and the Agency for International Development (USAID) and marked a broader shift in foreign policy to provide aid and expertise to developing nations. His theories of economic development were published in Walt Whitman Rostow, The Stages of Economic Growth: A Non-Communist Manifesto (Cambridge: Cambridge University Press, 1960).

funding, international educational opportunities were financed through global aid organizations, university scholarships and grant programs, and private donors such as the Fulbright Program (1946), the Institute of International Education, United States Agency for International Development (USAID), and Rhodes Scholarships.  

As private and public support grew, the number of foreign exchange students entering the US increased significantly. During the 1959-1960 academic year, 36,494 international students from 132 nations were enrolled in American colleges, and by 1979-1980; the number had increased to 286,340 students from 185 countries, an eight-fold increase in twenty years. At the same time, the regions of origin shifted; students coming from Europe decreased and those arriving from Africa and Asia increased. By the early 1960s, young African nationals valued an American education. As independence movements swept across the African continent, college degrees from universities in western nations smoothed the path to leadership roles in the newly formed African governments, providing access to political power as well as economic opportunities. Furthermore, educational exchange programs benefitted host nations. In 1961, State Department official Philip H. Coombs noted, “When you’re dealing with an African student, you may be dealing with a fellow who will be prime minister in five years.” In 2007, historians Teresa Bevin and Christopher Lucas published a history of foreign students in American universities and found that, “For African students during the 1960s and 1970s possession of an American college degree was a major, often life-changing, accomplishment.”

In 1982, the same year Lewanika completed his doctorate in Mississippi, Richard Ragan

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June 20, 2016).

7 Ibid., 172.
8 Ibid., 144, 172.
9 Ibid., 159.
10 Ibid.
began his freshman year at The University of Mississippi. The descendent of Jewish immigrants, Ragan grew up in the small, rural town of Cleveland, in the Mississippi Delta. When his father died, Ragan’s mother remarried a local dentist and he and his siblings enjoyed a life of economic security in a politically conservative household. Like many white children in the Delta, Ragan attended a private elementary school but completed his secondary education in the public school system. He graduated from Cleveland High School in 1982, the only public high school in the Delta to maintain a significant degree of racial integration following the Brown decision. Ragan enrolled in courses at The University of Mississippi in the fall where he spent the next four years participating in campus and fraternity activities and earning a BS in Business. For years, Mwananyanda Lewanika and Richard Ragan lived less than 250 miles apart and their paths never crossed. In a world of 4.5 billion people, it was statistically unlikely they ever would.

Almost two decades later the two men found themselves on opposite sides of an international debate over genetically modified food aid with millions of lives at stake. The rest of this chapter examines the political, economic, scientific, and technological global transformations that brought Lewanika and Ragan together, and the connections to the agri-business and research community in the Mississippi Delta when local actors blended science with capitalism and participated in the restructuring of global agriculture.

From Mississippi to Africa

With PhD in hand, Lewanika left Mississippi and returned to Zambia where he began a remarkable career in the sciences. He worked to expand access to educational opportunities in his country through the STEM-Z Center, an institution he helped found to promote the teaching
of science, technology, engineering, and math. Dr. Lewanika served as the founding president of the Zambian Academy of Sciences, Chairperson of the National Health Research Committee, and he worked with a national task force to ensure the containment of the poliovirus in Africa. He was associated with Zambia’s National Institute for Scientific and Industrial Research (NISIR) where he served as executive director for several years.\textsuperscript{11} At the international level, Dr. Lewanika served as a delegate to the World Trade Organization and represented Zambia in the four-year negotiation process to draft the Cartagena Protocol on Biosafety, an international treaty to regulate the movement of genetically modified organisms across national boundaries and protect biodiversity.\textsuperscript{12}

Following his graduation from The University of Mississippi, Richard Ragan embarked on an extraordinary career path of his own. His life took a dramatic turn when he joined the Peace Corps in 1986 and spent two years in the Philippines working with a highland tribe, the Ilongots, an experience he claims was “likely the most important experience in [his] life.”\textsuperscript{13} Ragan met aid workers from different regions of the U.S. and many countries around the world and often struggled with his Mississippi identity: “When I first started traveling out of the state, I always felt slightly embarrassed when I was asked where I was from. Once I mentioned Mississippi, you could immediately read the thoughts on a person’s face – racist, ignorant, backward. I almost always felt the need to further explain that I was Jewish in hopes of somehow blunting the stereotype.”\textsuperscript{14}

\begin{footnotes}
\item Paarlberg, Starved for Science, 14; “Aka’s brother Dr. Mbikusita-Lewanika is dead,” Zambian Eye.
\item Richard Ragan (Representative, United Nations World Food Program) interview by author, Cleveland, Mississippi, 2009.
\item Richard Ragan, e-mail message to author, 2007.
\end{footnotes}
After serving in the Peace Corps, Ragan returned to the states, earned a Master’s degree in International Development and Administration, and moved to Washington, D.C., where he took a job with a think tank focused on Asian foreign policy. There was a large Mississippi community in the city, but his politics had clearly shifted and he found himself at ideological odds with his fellow Mississippians who tended to be more conservative.\footnote{Ibid.} Ragan spent the next eight years working for the federal government. He served as a legislative aide to Congressman Les Aspin working on defense and foreign policy issues, holding two jobs under the Secretary of Defense where he concentrated on humanitarian aid and peacekeeping. In 1995, he went to work for the Clinton White House National Security Council as Director for Democracy, Human Rights, and Humanitarian Affairs where he was responsible for advising the National Security Advisor, the President, and the Vice President on global human rights and humanitarian issues.\footnote{Richard F. Ragan, Curriculum Vitae, provided to the author, 2006, copy in possession of the author.}

With two years remaining in the Clinton presidency, Ragan joined the United Nations World Food Program, the largest humanitarian aid organization in the world.\footnote{In 1998 the World Food Program served 75 million people in 80 countries and delivered 2,825,000 metric tons of food aid. For statistics see World Food Programme Annual Report 1998, http://documents.wfp.org/stellent/groups/public/documents/newsroom/wfp217472.pdf?_ga=1.141562354.1910884730.1407195804 (accessed July 7, 2016); Ragan, interview by author, 2009.} He was sent to China, and placed in charge of feeding operations for the entire country. A few months after arriving in Beijing, he was deployed to Kosovo where Serbian forces were waging an ethnic cleansing campaign against Kosovar Albanians. The international community became increasingly alarmed as the Serbian military committed brutal war crimes—including rape, torture, and mass executions—against ethnic Albanians in the region. When repeated efforts to negotiate a peace settlement failed, the crisis expanded and threatened the stability of the entire Balkan region. In March of 1999, NATO forces, with the support of the UN Security Council,
launched a seventy-seven day air campaign to end the conflict. When Ragan arrived in Kosovo in May, approximately 1.5 million Kosovar refugees had been displaced, another quarter of a million men were missing, and thousands had been executed. For the next three months, he served as a UN liaison to NATO, coordinating helicopter operations to deliver thousands of tons of food, water, and medical supplies to the refugees and provide support for international peacekeeping troops on the ground. After Kosovo, Ragan was assigned to yet another major crisis zone—Dili, East Timor—where civil war broke out after a majority of civilians voted for independence from Indonesia. When the United Nations National Security Council voted to send in international peacekeeping troops, Ragan again worked with military forces and humanitarian agencies to deliver aid to the thousands of wounded and displaced East Timorese refugees. He gained more expertise in disaster relief as an administrator with the US Agency for International Development (USAID), where he managed all the agency’s programs involving international humanitarian and disaster relief, an operation with a $1.5 billion budget and 250 staff members. Over a three year period, Richard Ragan accumulated experience in the logistics of transport and delivery of humanitarian aid to millions of people in crisis zones, witnessed brutality and mass starvation; operated in war zones where millions of refugees suffered from dislocated and UN colleagues lost their lives, but he was not prepared for the global controversy he found himself embroiled in a few months later.

Crisis in Zambia, 2001-2003

In August of 2001, a month before the attack the World Trade Towers, Richard Ragan


assumed his new World Food Programme post in Lusaka, Zambia. He landed in a country in crisis. Newly elected president, Levy Mwanawasa, and his administration faced charges of political corruption and rigged elections with three opposition parties challenging the results. Zambia, along with other countries in Sub-Saharan Africa, suffered from the devastating impact of the HIV/AIDS epidemic, a history of poor governance, intermittent military conflicts, and periods of drought leading to chronic food shortages. UN data documented the significant progress made in alleviating global hunger during the previous three decades, but Africa had been left behind in Norman Borlaug’s “Green Revolution” that increased global agricultural production and transformed Asia. In thirty years, the number of undernourished in the world fell from 38% to 18%, but the percentage of undernourished in southern Africa remained unchanged from the 1969 estimate of 34%. For Ragan, these problems paled in comparison to the immediate crisis: the threat of mass starvation. In 2001, Zambia, along with six other countries in Southern Africa suffered from the latest cycle of flooding and then severe drought—perhaps the worst in a decade—that devastated crops and left an estimated 14.5 million people in danger of starvation. An estimated 2.9 million Zambian lives were at risk, and the landlocked nation, with no direct access to seaports and few passable roads, presented a logistical nightmare for the rapid delivery of food aid to villagers in rural areas. It was under these circumstances that Mywanyanda Lewanika, Mississippi-educated biochemist, and Richard Ragan, Delta born international aid worker, found themselves on opposite sides of an intense global debate during a

22 The African famine was widely covered by major newspapers and media outlets from 2001 through 2003. Additional information on the crisis can be found in Paarlberg, Starved for Science, 14; Rachel Schurman and William A. Munro, Fighting for the Future of Food: Activists Versus Agribusiness in the Struggle Over Biotechnology (Minneapolis: University of Minnesota, 2010), 157-159.
humanitarian crisis with an estimated 15 million lives at risk and much of the world watching.

Journalists from major news organizations traveled to the hardest hit regions of Africa and posted reports of women begging for food to feed their children and villagers scavenging for roots and berries. One mother described the pain to a reporter from The Guardian: “The children cry themselves to sleep from hunger. We go further into the bush to find nuts and berries, but it’s not enough. If this goes on we’ll die.” In a nearby village, the children no longer attended school. According to the village leader, “They said they were too weak to walk or concentrate. That never happened before, no matter how hard it got.” In Ethiopia, the Prime Minister told BBC News the famine could be worse than in 1984 when one million people in his country died of starvation: “If [the 1984 famine] was a nightmare, then this will be too ghastly to contemplate.” He claimed six million people were in immediate need and predicted the number could triple. In Malawi, one journalist dubbed the crisis the “worst famine ever.” In addition to drought conditions, hippos and elephants had destroyed crops, and hospitals were treating amputees who had been attacked and mutilated when caught stealing food.

The global response was immediate. For the first time in history, the United States put supply ships on the high seas before the WFP made a formal request for assistance. U.S. cargo ships ferried thousands of tons of corn across the Atlantic while World Food Programme workers and other relief organizations coordinated plans for the rapid and efficient distribution of food aid to remote villages in countries where roads, if they existed at all, were often impassible for much of the year. The problem was not one of supply, but one of access and distribution. Ragan

explained the situation in an interview: “...there is enough food in the world to feed the entire population of the world, yet we estimate some 800 million people still go to bed hungry every night. In Zambia, many of these districts are faced with access problems.”

Aid workers had the resources they needed to avert mass starvation—surplus food stocks, modern transportation and communication systems, and a sophisticated transnational relief system—but delivery of relief aid needed to begin immediately.

Then the unimaginable happened: Zimbabwe refused a U.S. donation of 10,000 tons of genetically modified (GM) corn. The shipment of corn was diverted to other countries, but the crisis worsened when Malawi, Mozambique, and Zambia also rejected unmilled GM corn. African officials maintained the decision was made to protect the integrity of African crops. They expressed concern that farmers would plant the kernels, which might cross-pollinate and “contaminate” their crops, making them less marketable to European customers. The international community was shocked that African leaders would refuse to accept genetically modified food, which had been grown and consumed for years without any scientific evidence of health or environmental concerns, even as their people faced starvation. A headline in The Economist asked: “Better off dead than GM fed?”

Over the following months, conditions in southern Africa worsened. Villagers scavenged for food, and frustrated aid workers faced off with local government officials in heated debates. Through a series of negotiations, the two sides reached an agreement when Zimbabwe, Malawi, and Mozambique agreed to accept milled GM corn, which could not be used for planting. But the disagreement and bargaining process resulted in critical delays in aid distribution. Robert

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Paarlberg, expert on the impact of science and technology in developing nations, wrote a scathing critique of the demands of African leaders: “As a result …, WFP needed to reroute and even reverse a number of food aid deliveries to the region. Large shipments of GM maize were stranded at ports of entry, and WFP was forced to make emergency arrangements to mill large quantities of GM maize in South Africa … The process of milling added $25 per ton to the cost of delivering the food aid and resulted in delivery delays.”

With the threat to crop contamination resolved, most countries in the region moved ahead with food distribution, but Zambia remained firm in its absolute rejection of GM corn in any form. Government officials not only refused the donations en-route, but they also would not allow Ragan and his team to distribute 18,000 tons of corn already stored in the country, some of which had been ground into cornmeal. Zambian President, Levy Mwanawasa, claimed the corn was not safe for human consumption and he would not feed his people “poison.” Mwanawasa, along with several scientists and advisors, cited the potential health threat GM foods posed. “I will not allow Zambians to be turned into guinea pigs no matter what the levels of hunger in the country,” declared Mwanawasa. “We would rather starve than get something toxic.” Government officials also cited the negative impact genetically modified crops might have on trade with European countries where consumers virulently maintained an anti-GM stance to protect their food supply. The Zambian vice president told UN aid workers that allowing genetically engineered corn into the country could have a devastating impact on their agricultural

33 “Zambia: WFP urges government to decide whether to accept GM food,” IRIN Africa; Cauvin, “Between Famine and Politics, Zambians Starve.”
34 Manda, “Controversy rages over ‘GM’ food aid.”
economy. He maintained the “decision to reject some of these foods is out of fear… We have been told we will lose our European market if we start growing GM foods. Hungry we may be, but GM foods pose a serious threat to our agricultural sector…”36

The Zambian government issued its first official rejection of genetically engineered corn after a public forum where Dr. Lewanika presented a position paper on the danger GMOs posed to the environment and human health. He warned that human consumption of genetically altered corn in any form could result in serious allergic reactions, resistance to antibiotics, and an increased risk of cancer. As executive director of Zambia’s National Institute for Scientific and Industrial Research (NISIR) and a participant in the negotiations leading up to the Cartagena Protocols on Biosafety, his opinion carried a great deal of weight with the Mwananasas administration. According to Lewanika, representatives from “all walks of life” took part in the discussion: Zambian citizens, tribal leaders, representatives from the UN and non-governmental organizations, scientists and university professors, and government officials.37 Representatives from NGOs opposed to genetically modified crops, most of which had received funding from European organizations, were some of the most vocal anti-GM participants at the meeting.38

According to Lewanika, however, “An overwhelming majority of participants spoke against accepting the GE food aid. Only a couple of participants spoke in favor of accepting the GE food

36 Meron Tefsa Michael, “Africa Bites the Bullet on Genetically Modified Food Aid,” worldpress.org, September 26, 2002.
37 Mwananyanda Lewanika appeared as a representative of Zambia’s National Institute for Scientific & Industrial Research at the Biodevastation 7 Conference in May, 2003, in St. Louis, Missouri, home of the headquarters of Monsanto, one of the most powerful agri-chemical companies in the world. At the conference, Lewanika delivered a speech on the Zambian food crisis and refusal of genetically modified food aid. For the full text of the speech, see Mwananyanda Mbikusita Lewanika, “The Real Story Behind the Food Crisis in Zambia,” Synthesis/Regeneration, 32, Fall 2003, http://www.gr eens.org/s-r/32/32-06.html (accessed February 20, 2017).
38 Paarlberg, Starved for Science, 12-16, 141-145.
aid.”39 After the “national consultation,” Lewanika advised Zambian leaders to refuse GM food aid and invoked the Precautionary Principle under the Cartagena Protocol, an international agreement that granted each nation the right to halt the importation of genetically modified organisms they deemed harmful to public health or the environment. He based his recommendations on guidelines for the global exchange of GMOs contained in the protocol, policies Lewanika helped draft.40

The nation’s refusal of GM food aid in any form set off another round of international media coverage as journalists focused their attention on Zambia. Headlines read: “Zambians starve as food aid lies rejected,” “Between Famine and Politics, Zambians Starve,” and “Zambia slams door shut on GM relief food.”41 The debate intensified as aid organizations, political officials, and environmental activists weighed in on the crisis. The U.S. provided approximately 75% of WFP food donations for southern Africa, and angry U.S. officials, dealing with the aftermath of 9/11 attacks, had little patience with the Zambian government.42 President Bush sent the head of USAID, Andrew Natsios, to convince Mwanawasa and his advisors to change their position on GM maize.43 U.S. Secretary of Agriculture, Ann Veneman, accused the Mwanawasa administration of bowing to the influence of radical European environmentalists and using “misinformation” to “create an atmosphere of fear,” and U.S. Secretary of State Colin Powell rebuked African leaders for refusing aid when GM foods had been consumed in the US for

39 Lewanika, “The Real Story Behind the Food Crisis in Zambia.”
40 Ibid.; Paarlberg, Starved for Science, 12-16, 141, 145.
42 Cauvin, “Between Famine and Politics, Zambians Starve.”
years. UN organizations, including the World Health Organization and Food and Agriculture Organization, joined the WFP in arguing that genetically modified food was safe for consumption. The fact that Zambia had accepted genetically altered food aid in the past further complicated the situation.

On the other side of the debate, environmental groups and activists cited the possible threats GMOs posed to biodiversity and human health. Journalist Owen Sichoneb wrote, “Nobody knows how the grandchildren of the people who eat GM soya or GM maize will be affected. Nobody knows how the genes with the pollen in the wind will affect other varieties. Why take the risk?” Greenpeace, Actionaid, Friends of the Earth, Food First, and the Institute of Gene Ecology, all European dominated organizations, expressed their support for Zambia’s position against genetically modified food. Others charged the U.S. with practicing a form of economic imperialism targeting the European Union and its trade restrictions on the importation of gene-altered commodities. Another journalist claimed Africa, caught in the middle of this political and economic power struggle, was nothing more than “a pawn in a global chess game” where the U.S. promoted GM foods in order to protect the interests of powerful American-based biotech companies. Many praised Zambian officials for refusing to bow to US demands and serve as a dumping ground for US surplus corn. A Food First activist said Africans should “tell the U.S. to go to hell.”

With no compromise in sight, USAID’s Andrew Natsios offered to send a group on a

\[\text{44 A. Veneman in Ingram, “GM food row clouds famine relief effort in Africa;” Colin Powell in Michael, “Africa Bites the Bullet on Genetically Modified Food Aid.”} \]
\[\text{45 Manda, “Controversy rages over ‘GM’ food aid.”} \]
\[\text{46 Paarlberg, Starved for Science, 141-143.} \]
\[\text{47 Michael, “Africa Bites the Bullet on Genetically Modified Food Aid.”} \]
\[\text{48 Paarlberg, Starved for Science, 142-145.} \]
\[\text{49 Michael, “Africa Bites the Bullet on Genetically Modified Food Aid.”} \]
\[\text{50 Paarlberg, Starved for Science, 145.} \]
fact-finding mission to the U.S. to meet with scientists in an effort to convince Zambians to distribute GM corn. They accepted the proposal and a seven-member delegation, including Lewanika, traveled to the U.S. and extended the trip to include stops in Britain, South Africa, Norway, and the Netherlands. While politicians, scientists, and environmental activists argued, Zambians suffered. Some waited for hours for corn rations outside warehouses only to be turned away and the doors locked. New York Times reporter, Henri Cauvin, described the situation in one village:

About all Josephine Namaangolwa has left in her hungry, weary body is anger, and in an instant it all comes surging out. It has been days since she had a nourishing meal to feed her eight children, victims, like millions of other Zambians, of the deepening food shortage that is sweeping southern Africa. Yet before her eyes stand sacks and sacks of untouched—and for now untouchable—cornmeal, which has been the foundation of the Zambian diet for generations and is currently at the center of a scientific and diplomatic debate over genetically modified food. It is an argument that means nothing and everything to Ms. Namangolwa. “We are dying here,” she shouts as aid workers arrive in her village of Chippa to check on their warehouse and the nearly 500 metric tons of cornmeal stored inside, all of it from the United States and some of it almost certainly from genetically engineered crops. “We want to eat… This is the work of politicians,” Ms. Namangolwa said as she was looking in on the stockpile of corn. This meal is O.K. They are not helping us. They are killing us.”

Los Angeles Times reporter Dina Kraft visited the village of Kooma where locals reacted to the news of President Mwanawasa’s official rejection of GM food aid: "He doesn't want? But we want. He's eating, all day. He is satisfied. Here, we are hungry. Here, we go starving,” BBC World News issued reports of looting while Ragan—with a $138 million budget, 230 aid workers, and thousands of tons of corn ready for distribution—could do nothing. With food

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52 Manda, “Controversy rages over ‘GM’ food aid.”
53 Cauvin, “Between Famine and Politics, Zambians Starve.”
55 “Richard Ragan’s Farewell Message to Zambia,” Times of Zambia, March 30, 2004; Ragan, interview by
stocks running low, he insisted the Zambian government make a decision: “The pain is real—we need to act now.”

The fact-finding delegation returned to Zambia even more resolute in their decision to reject GM aid, and immediately issued a formal report declaring genetically engineered corn a danger to public health. Lewanika, one of the primary authors of the report and spokesperson for the group, told the press the consumption of GM corn in large quantities would compromise the health of the Zambian people, an argument difficult to understand considering the high rate of HIV/AIDS infection coupled with the threat of starvation. Humanitarian aid organizations had no choice but to locate and distribute non-GM food as quickly as possible. According to Ragan, this required an entirely new approach to sourcing, funding, and delivery: “Because our choice of commodities was limited, we needed to source quickly from the region. Without the EU (European Union), which was our biggest donor in Zambia, we couldn't have done this.” The United Kingdom rerouted funding through the Department for International Development, Norway donated more than 100 trucks to transport food aid to remote regions of the country, and early rains eased the severity of the crisis. Mass starvation had been avoided but the debate over the transnational flow of genetically modified organisms was far from over.

Making the Connection: Zambia and the Mississippi Delta

The Zambian crisis raised a number of questions: Why did the conflict over genetically engineered food occur in this nation at this time? What drove Zambian leaders, who had

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accepted GM maize in the past, to stand firm in their refusal to allow the distribution of bioengineered food to starving citizens during the 2001 disaster? Why did this small African country remain the lone dissenter even as others in the region opened their warehouses to GM corn? And finally, how were these events connected to the people and institutions in the Mississippi Delta? At the local level, the issues seemed clear: Zambian leaders claimed the distribution of GM corn posed a threat to the health of their citizens and the nation’s agricultural economy. But there was far more at stake. Much had changed since the Ragan and Lewanika left Mississippi, and the crisis that pitted these men against one another marked the climax of two decades of profound political, economic, scientific, and technological global transformations.

The confrontation in Zambia was the product of an environmental and humanitarian disaster combined with a unique set of historical circumstances, which, in turn, generated a series of actions and reactions. These men were operating in a new global geopolitical environment under a different set of international norms and conditions. The confrontation over genetically modified food aid was part of a growing concern over the rapid pace of globalization and its impact on individuals, local economies, and the environment. In short, Zambia became the site of contestation over who would control the process and who would make the rules.

During the last quarter of the twentieth century, three critical forces accelerated the process of globalization: geopolitical realignments, economic reforms and business restructuring, and the technological and scientific revolutions. Political transformations led to the destruction of the bipolar international system that emerged after World War II. The Cold War ended, the Soviet Union collapsed, European nations united to an economic and political union, and Maoist leaders fell from power in China. Democratization often accompanied these political
realignments: democratic governments emerged in newly independent Eastern European nations, apartheid laws were repealed in Africa, and student protesters filled China’s Tiananmen Square. Previously powerless individuals, groups, and nations claimed a voice in the new multipolar global community.

Changes in the international geopolitical landscape coincided with economic reforms. Communism in the Soviet Union and China gave way to market oriented systems and the European Union grew into the second largest economy in the world. In the U.S., the prosperity of the 1950s and 1960s gave way to economic stagnation in the 1970s. Rampant inflation set in at home and two oil crises exacerbated global economic and political tension. Until the 1970s, the nation maintained a trade surplus, but at the end of the decade, the U.S. trade deficit reached $30 billion dollars and continued to grow reaching $75 billion in 1983. In an effort to address the volatility of the decade, conservatives turned to neoliberal economic policies. Based on the theories of economists Milton Freidman and Friedrich von Hayek, neoliberalism promoted free trade, deregulation, tax cuts, and less government intervention in the business cycle. Under the administrations of Ronald Reagan and Margaret Thatcher, conservatives in the U.S. and Great Britain removed trade barriers, promoted stronger international trade networks, and encouraged investments in new markets. The North American Free Trade Policy (NAFTA), negotiated under the George H.W. Bush Administration and put into force during the Clinton Presidency in 1994,


was adopted to increase the flow of goods and services across North America and stimulate economic growth in the western hemisphere.\textsuperscript{61} The rise of neoliberalism and the revival of \textit{laissez-faire} economic policies in the late 1970s continued to transform the international economy for the next two decades and were part of government-backed efforts to promote economic growth. In the final quarter of the twentieth century, the world was moving toward open markets, economic liberalism, and an increase in the transnational flow of capital, goods, and technology.\textsuperscript{62}

Economic and political reforms during this period led to business restructuring. Deregulation, lower tax burdens, and support for free trade smoothed the way for the rise of transnational corporations. The business climate became more aggressive requiring timely decisions and immediate action to remain competitive in the knowledge based economy.\textsuperscript{63} These supranational companies acted quickly to capitalize on the favorable business climate. They invested billions of dollars in research and development, cultivated new trade partners, and inserted themselves into undeveloped markets. Transnational corporations also leveraged digital technology and scientific advances of the period to gain unprecedented power and achieve higher profit margins.

The rest of this chapter examines the intersection of the global economic and political transformations of the last half of the twentieth century with agri-science in the Mississippi Delta. Building on the local research and seed breeding programs established decades earlier in the region, Deltans became actors in the transnational business climate of the period. Working through three institutions, the Delta Branch Experiment Station, Stoneville Pedigreed Seed, and

\begin{thebibliography}{99}
\bibitem{61} Ibid., 880-881.
\bibitem{62} On rise of neoliberal economic policies and impact on agri-businesses see Schurman and Munro, Chapter 1.
\bibitem{63} Ibid.
\end{thebibliography}
Delta and Pine Land Company, Deltans merged science with capitalism. This chapter reveals a dynamic, modern research community that played a fundamental role in the transfer of science-based agriculture and biological innovations from the Mississippi Delta to the world and contributed to the radical restructuring of global agriculture.

**The Silicon Valley of Agri-Research**

Economic volatility in the 1970s forced Delta farmers to adjust to the realities of the global marketplace. Producers experienced over a decade of extreme swings in commodity prices, dramatic increases in cost inputs, and plummeting land values. Delta producer James Lindsey described the situation:

> In 1972 some farmers booked their cotton in the spring for thirty cents a pound and in the fall the price fell to twenty cents a pound. So, in the spring of 1973 when it went back up to thirty cents, lots of people booked out of fear. In the fall it started going up and hit a dollar a pound! The next year, '74, the price of production went up, oil prices went up, there was gas rationing and fertilizer went out of sight. Everything just went off the charts in cost! Cotton went back down to forty cents a pound and yields were terrible. So we went from rags to riches in a year. There wasn't a decent yield on cotton again until 1978. Five years of low yields and the experts never figured out why. During that time a lot of farmers went broke. Land went down in value, and the crisis continued into the 1980s when interest rates spiked near 20%. The farming economy stayed flat until the 1990s.⁶⁴

To cope with the crisis, farmers turned to diversification and science. Established lines of agri-research at the Delta Branch Experiment Station were expanded and new programs established. When superintendent Dr. Charles Shepherd arrived at the Station in 1970, more than 100 scientists were at work on 17 lines of agri-research. Building on the prolific body of science and engineering produced during the postwar years, the 1970s were a time of “coordinating, adapting, and fine-tuning previous research into highly efficient mechanized agriculture,”

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⁶⁴ James Lindsey (retired Delta farmer) in discussion with the author, February 21, 2010.
explained Shepherd. Collaboration across departmental and institutional lines increased and
task forces were formed to address production problems through an interdisciplinary team based
approach. Federal and state institutions, including the United States Department of Agriculture
and Mississippi State University, partnered with chemical and seed companies and combined
their resources and expertise to provide farmers with the latest in meteorological science,
ing engineering, ag-economics, chemistry, plant breeding, entomology, soil management, and
irrigation systems. The primary goals were to increase efficiency, lower cost inputs, produce
higher yields, and—most importantly—generate greater profit margins for producers.

While some Delta farmers continued to focus on cotton, others turned to nontraditional
crops to maximize output on marginal land. As late as the 1940s, much of the Delta’s clay and
buckshot land remained undeveloped. Substantial acreage was still forested and prone to
flooding. But between the 1950s and late 1970s the additional clearing of timber and the
introduction of new crops combined with agri-science and mechanization made previously
unproductive land profitable. In the 1970s, Deltans investigated every possible option for
utilizing the land to turn a profit. Researchers at the Station did viability studies on pecans,
English peas, onions, and cucumbers. They experimented with Irish and sweet potatoes, peanuts,
and tomatoes. After the Mississippi Legislature approved the operation of wineries in the state,
agronomists explored the possibility of planting vineyards to grow muscadine grapes for wine.

65 Amy Lipe Taylor, *The Delta Branch Experiment Station: 100 Years of Agricultural Research*, ed. James W.
Smith and Charles E. Snipes (Starkville, MS: Mississippi State University, 2004), 37; Donald H. Bowman, *A
History of the Delta Branch Experiment Station, 1904-1985* (Starkville, MS: Mississippi State University, 1986), 54.
67 Ibid., 64.
68 Bowman, *A History of the Delta Branch Experiment Station*, 60.
69 Ibid.
As global demand for grain and protein grew, consultants and extension agents encouraged Delta farmers to increase rice and soybean acreage. In response to the Russian grain shortage in 1972, the federal government lifted restrictions on the number of acres allotted for rice farming and production increased significantly. As a result, more grain experts arrived at the Station where they studied irrigation systems, developed treatments for rice diseases, and bred new varieties with traits specific to the Delta climate and soil. The fledgling rice research program grew throughout the 1970s, and in the 1980s rice specialists took the breeding program global when they established a facility in Puerto Rico to take advantage of the dual growing season. With two crops a year, the time needed to develop new rice varieties was cut in half. But even with this advantage, it took 10 years to produce a new strain, which was considered a major accomplishment in agricultural research in the 1980s when conventional seed breeding remained a long and laborious task. The expanding rice industry attracted mills to the Delta. Uncle Ben’s Foods, Inc. and Pacific International Rice Mills, Inc. built facilities in Greenville for easy access to the river—which facilitated the rapid transport of rice to national and global markets. With the introduction of each new crop to the region, a pattern emerged: commodity specific chemical and seed companies moved in, consultants set up shop, research programs were established and boosters organized at the local, state, and national levels to secure funding for research and

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70 Lindsey, in discussion with the author, 2010.
71 Rebekah Ray, “Delta rice researcher retires from MSU—Dwight Kantor,” Delta Farm Press, July 6, 2012; Taylor, The Delta Branch Experiment Station, 58; Bowman, A History of the Delta Branch Experiment Station, 58; Jody Stovall (retired former Location Coordinator, Delta Branch Experiment Station) interview by author, July 14, 2015, B.F. Smith Building, Stoneville, Mississippi, notes in possession of the author; Bill Arnold (retired former President of International Division, Delta and Pine Land Company) interview by author, 2007.
72 Bowman, A History of the Delta Branch Experiment Station, 57.
promote marketing in order to maximize profit margins. Many believed diversification was the key to economic survival.

As soybean acreage grew, seed breeders at the Station developed a remarkable number of varieties for different soil types and insect problems. Working in collaboration with the USDA and other researchers across the South, Delta agronomists released over a dozen new soybean varieties in the 1970s and 1980s. In less than 4 decades from 1948 to 1985, breeders at the Station released 22 varieties providing farmers across the U.S. South with a wide selection for planting in different soils and environments. Scientists at the Station dominated the soybean research and development field from World War II until the turn of the century.

Some Delta farmers moved away from traditional crops altogether to engage in a promising new venture—aquaculture. Mississippi quickly emerged as the leader in catfish production in the nation. Ponds were built, scientists were hired, and laboratory space was set for aquaculture research. Catfish producers and the Delta Council lobbied for funding to secure land for additional ponds in order to expand the research program. In Mississippi, the industry grew from an estimated 25,000 acres in ponds in the late 1970s to approximately 75,000 acres in catfish production in 1985. An entire infrastructure and supply chain was established in the Delta: research facilities, processing plants, water management programs, feed mills, consultants,

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73 Taylor, *The Delta Branch Experiment Station*, 57.
74 Historian Gilbert Fite’s history of southern agriculture places the initial interest in soybean production in the 1920s during the boll weevil crisis. During World War II, the federal government encouraged soybean production and the number of acres planted in Mississippi expanded and continued to do so the years after the war. See Gilbert Fite, *Cotton Fields No More*, (Lexington: University Press of Kentucky, 1984), 112, 165; Taylor, *The Delta Branch Experiment Station*, 51-53; Bowman, *A History of the Delta Branch Experiment Station*, 57; Stovall, interview by author, 2015.
75 Taylor, *The Delta Branch Experiment Station*, 79; Bowman, *A History of the Delta Branch Experiment Station*, 63.

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and equipment suppliers.\textsuperscript{76} The small town of Belzoni established a new Delta tradition with its annual Catfish Festival and chemical companies hosted fish fries for their customers.

But despite the focus on diversification in the 1970s and 1980s, cotton farming remained critical to the Delta economy. Consequently, scientists at the Station maintained several lines of research to support cotton production with seed breeding a top priority. Agronomists had been developing new cottonseed varieties with specific traits to sell directly to Delta farmers since 1911, but in the 1970s the focus of the program shifted. Former Station superintendent, Donald Bowman, explained the change:

A little noticed, but significant, change in policy with regard to planting seed occurred in this decade. For approximately the first 60 years of its existence, the Delta Station had expended considerable effort supplying pure seed directly to Delta planters. While this practice was of great importance to the important planter and also of some monetary reward to the Station, it nevertheless required a considerable amount of effort on the part of Station personnel which otherwise could have been spent on research. With the development of the Mississippi Foundation Seed Stocks organization at Mississippi State University in the 1950s, more and more of the responsibility for producing pure seed was delegated there. By the end of the 1970s, the Delta Station was producing only limited amounts of breeder and /or foundation seed of a limited number of varieties of rice, soybeans, and cotton for the Mississippi Foundation Seed Stocks organization. No longer was any pure seed sold by the Station to planters either directly or through county agents.\textsuperscript{77}

Relieved of the responsibility of supplying planting seed to Delta farmers, scientists at the Station focused all their time and energy on research. The shift ushered in a prolific period of development of new breeding stocks of cotton for release to commercial seed breeders, including Stoneville Pedigreed Seed and Delta and Pine Land. Between 1970 and 1976, the Station released 30 genetic cotton strains to breeders. In 1978, cotton researchers introduced two commercial varieties, which marked the first time the Delta Station had developed a cotton strain

\textsuperscript{76} Bowman, \textit{A History of the Delta Branch Experiment Station}, 63.
\textsuperscript{77} Ibid., 54.
for the commercial market since 1942. Varieties developed at the Station quickly captured a portion of the planted cotton acreage in the Mississippi Delta. Success in the breeding program continued throughout the 1980s with the arrival of Dr. Bob Bridge, often referred to as Stoneville’s famous cotton breeder. Bridge and his team developed a “new class of cotton germplasm” which led to the development of 30 new non-commercial strains and 4 commercial varieties of cotton. “Bridge’s varieties absolutely revolutionized cotton farming in the south and had a $40 million economic impact on this region. His varieties dominated until 1995, when Bt [genetically modified] cotton arrived on the scene.”

Dr. Bridge joined a number of internationally renowned researchers who spent most or all of their professional careers working at the Delta Station. Dr. Gene Wills arrived in 1966 and spent the next four decades at the facility. Wills compared the Station to other agri-research facilities he visited: “When I came to Stoneville… I couldn’t believe the number of scientists, the library, and the facilities. I’ve had the opportunity to travel all over the world, and I’ve never seen any research facility to match this place.” He added that much of the success was due to “the network of cooperative efforts between state and federal scientists.” Bill Barrentine, soybean expert and weed scientist, worked alongside Wills for almost 30 years. In the mid 1980s rice specialist, Dr. Dwight Kantor joined the staff. Kantor came to Mississippi after spending 14 years developing new varieties in Vietnam, Bangladesh, and the Philippines, and remained on staff until his retirement 24 years later. Agri-scientists recognized the professional advantages

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78 Ibid.
79 Taylor, The Delta Branch Experiment Station, 37; Arnold, interview by author, 2007.
81 Ray, “Delta rice researcher retires from MSU – Dwight Kantor;” Taylor, The Delta Branch Experiment Station, 58; Bowman, A History of the Delta Branch Experiment Station, 58; Stovall, interview by author, 2015.
of working in the region. Weed scientist Mark Kurtz expounded on the professional opportunities in the region: “There are very few places in the world where a scientist has the opportunity to work with 25 to 75 other scientists.” He described the research community as “a virtual Mecca of scientific information where resources abound.”

Interagency collaborations between the USDA and MSU research teams were common with the scientists often sharing office and lab space. Jody Stovall, native Deltan and retired farmer, worked as Location Coordinator at the Delta Station for 20 years. He described the collegial working environment: “Early on, …the state and federal agencies were all in one large facility. You couldn't tell who worked for each entity. They shared space, a library, they ate lunch together… Visitors could just walk right in.” Stovall went on to explain that these were not simply social encounters: “Before they had to get patents they shared the technology, designs, seed research, and equipment. Anybody could copy it. Researchers focused on getting information out the farmer as quickly as possible for practical use.

Scientists and engineers at the Delta Station generated research that was disseminated nationally and globally. Members of the staff attended conferences in the U.S and abroad where they presented their findings. Wills traveled to Australia, England, Asia, South Africa, and New Zealand, and others had similar experiences. Station researchers published their results in professional journals and by the mid 1980s findings were accessible in every state in the nation and over 60 foreign countries. With the introduction of computer systems, the time to analyze data decreased significantly and opened up a new channel for publishing results on a much

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82 Kurtz quoted in Taylor, The Delta Branch Experiment Station, 60.
83 Stovall, interview by author, 2015.
84 Stovall, interview by author, 2015; Meeks, interview by author, 2016; Arnold, interview by author, 2007; Winston, Travels in the Genetically Modified Zone, 238.
85 Stovall, interview by author, 2015; “Gene Wills,” obituary.
86 Bowman, A History of the Delta Branch Experiment Station, 64.
broader and efficient scale. 87

Public research institutions at the Station shared their findings with private companies. The exchanges and collaborations between the Delta Branch Experiment Station, Stoneville Pedigreed Seed, and Delta and Pine Land Company that began decades earlier continued during the last half of the twentieth century. Roy Meeks worked for Stoneville Pedigreed Seed 21 years where he served as Vice President of Sales. When interviewed in 2016, he was the only surviving member of the corporate staff. After earning a Master’s degree in entomology from MSU, and Meeks and his wife moved to New York where he worked for Union Carbide. In 1965, George Ray Walker, his father-in-law and owner of Stoneville Pedigreed Seed, recruited them to come back to the Delta to join the family business, a move Meeks claims they were reluctant to make. He recalled the meetings and exchanges that took place between personnel from the Delta Station, Stoneville Pedigreed Seed, D&PL, and local businessmen: “All of the investors and scientists and breeders from Stoneville Pedigreed Seed and Delta and Pine Land and the Station would visit with each other on a regular basis. They all exchanged ideas even though they were competitors.” He emphasized the personal relationships formed across institutional lines, “these men knew each other… Bill Manning was a long time seed breeder along with Bob Bridges and Bill Meredith from the station. Minor Gray from Delta and Pine Land would come to Stoneville and visit with Bill Manning. It was a small close knit community.” 88 The men lived and worked in the same communities, they belonged to the same churches, joined the same clubs, and their children attended the same schools. All of which

87 Ibid., 54, 61-62.
88 Roy Meeks (retired former Vice President of Sales, Stoneville Pedigreed Seed) interview by author, July 5, 2016, at former offices of Stoneville Pedigreed Seed, Leland, Mississippi, notes in author’s possession.
facilitated a constant exchange of the latest innovations in agri-based science, engineering, and economics.

By the second half of the twentieth century, the Delta Branch Experiment Station had matured into a sophisticated research facility with a global reputation. In 80 years, from its founding in 1904 to 1984, the Station expanded from 200 to 3,943 acres with a significant number of public and private research facilities, chemical companies, and agri-support services that provided modern, cutting edge science-based production technologies to the region and the world. Commercial agriculture advanced to a new level of technical sophistication and scientific precision, and the Delta community laid claim to a well-earned reputation as “the Silicon Valley of agri-research.”

Due to the Station’s reputation and the high concentration of agri-related businesses nearby, the facility attracted a substantial number of visitors each year. As Location Coordinator, one of Jody Stovall’s primary responsibilities was to serve as tour guide for the disparate groups visiting the campus. He hosted officials from U.S. government agencies, university students, 4-H club members, school children, members of farm and civic organizations, and agri-researchers from stations across the country. In addition to local and national visitors, Stovall entertained international guests. As part of a course on southern culture and regional history, “Vanderbilt came every year and brought foreign students,” said Stovall. Others came from Africa: “Most of these were usually affiliated with some type of relief or aid organizations. NGOs or government agencies sponsored these trips.” Some visitors arrived in the Delta as part of a USDA international exchange program where American farmers traveled abroad and producers from

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90 Stovall, interview by author, 2015.
other countries came to the U.S. But chemical and seed companies sponsored the largest groups of international visitors to the Delta.⁹¹

Chemical companies moved into the Delta in the postwar years to access the research community where they conducted field trials on new products and collaborated with experts at the Station.⁹² In the 1980s and 1990s, U.S. agri-supply companies became increasingly interested in foreign markets. As part of an effort to expand their global reach, companies organized trips for potential international customers to the Delta. “Groups came from Georgia and other former Soviet bloc countries and Germany, home to chemical giant Bayer. Others arrived from Egypt, Israel, Australia, New Zealand, Japan, Thailand, India, and several different regions of China,” recalled Stovall. “Chemical and seed companies focused on major producers in Latin American including Ecuador, El Salvador, Mexico, Panama, but the largest groups came from Argentina and Brazil.” Agri-supply companies were particularly interested in South American countries where farms of 40,000 to 50,000 acres in size were not uncommon. Furthermore, there were no government restrictions on acreage or chemical use, which made the region a very attractive market. In the mid 1990s, federal and state agencies at the Station hosted approximately 10,000 visitors annually. Stovall handled as many as 5,000 guests himself each year.⁹³ In the second half of the twentieth century, international visitors from every continent in the world except Antarctica visited the research community in the Delta.

In spite of major advances in modern science, agri-engineering, and economics, and despite millions of dollars in public and private funds spent to advance U.S. agriculture,

⁹¹ Ibid.
⁹² Ibid.; Pamphlets provided to author with company logos of agri-companies located near the station, in author’s possession.
⁹³ Ibid.
American farmers continued to grapple with an intractable problem—chemicals. In 1962, Rachel Carson’s *Silent Spring* helped launch a public crusade against the chemical industry and gave rise to the modern environmental movement. As the movement gained momentum, it influenced public policy. Congress passed the Environmental Protection and Clean Air Acts in 1970, the same year Americans observed the first “Earth Day,” where millions participated in events in cities across the U.S.  

Members of the agricultural community were keenly aware of negative public opinion regarding agri-chemicals, and research at the Station reflected growing environmental concerns. Scientists and engineers searched diligently for ways to reduce chemical use—not only appease the environmentalists, but also reduce production costs for farmers. The staff tested chemicals and designed equipment for efficient application. Researchers were under constant pressure to develop safe insecticides. The cost factor of controlling insects and losses due to damage narrowed profit margins and increased expenditures on chemicals—a cycle with negative implications for human health, the environment, and profit margins. In the 1970s, entomologists in the Delta began to experiment with biological—as opposed to chemical—solutions to control insects. In an effort to address the insecticide problem, a scientist at the Station found a way to breed genetically sterile moths the late 1970s and into the 1980s but lack of funding ended the program.  

Agri-scientists made some advances in reducing chemical use, and researchers and engineers at the Stations were recognized as global leaders in herbicide development and

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application techniques for weed control, but overall, their efforts failed to significantly reduce the need for chemicals.\textsuperscript{96}

The prolific outpouring of agricultural research at the Delta Station in the 1970s and 1980s coincided with two important developments: advances in biotechnology and changes in U.S. patent law. Much of the initial excitement surrounding genetic research focused on potential advances in the health sciences and pharmaceuticals industry, but scientists also recognized the impact biogenetics could have on agriculture. 1973 was a pivotal year. The Watergate hearings began, the Supreme Court handed down \textit{Roe v Wade}, and OPEC declared and oil embargo against the U.S. That same year, researchers successfully transferred genes from one organism into DNA of another.\textsuperscript{97} Although genetic engineering or “gene splicing” was a major scientific breakthrough, agri-businesses showed little interest in investing in the technology until 1980 when the U.S. Supreme court handed down a ruling protecting intellectual property—including bioengineered plants. The ruling captured the attention of large agri-chemical corporations. Bioengineering made it possible to combine chemical and seed components into a single delivery system; U.S. patent law made it profitable.

Patent-protected bioengineered plant material led to radical restructuring in the agri-business community as chemical companies looked to capitalize on the new legal climate. They wasted no time combining science with business and a new breed of “biotech scientist-entrepreneurs” emerged as they raced to develop and market genetically engineered crops.\textsuperscript{98} Prior to the 1990s, the agri-seed and chemical businesses were separate and very distinct services with no overlap between the two, but advances in biotechnology radically shifted the profit

\textsuperscript{96} Ibid., 57.
\textsuperscript{98} Schurman and Monro, \textit{Fighting for the Future of Food}, xii.
potential from insecticides, herbicides, and fertilizer to seed. In addition to higher yields, biotechnology could engineer seeds that were resistant to insects, diseases, and viruses, resulting in a major reduction in chemical applications. Other possibilities included higher nutritional value in food crops and drought tolerant seed for planting on marginal land with limited water resources, not to mention the profit potential for agri-businesses. When genetically engineered seed aligned with the agri-industry, chemical giants scrambled to purchase small independent seed companies. In short, agri-chemical companies recognized genetically modified seed had the potential to transform global agriculture and—in the process—generate billions of dollars in profit.

These broader changes affected the cottonseed industry in the Delta. Local seed research—funded with county, state, and federal dollars and transferred to private companies—helped lay the foundation for globalizing bioengineered commodities. In the 1980s, Stoneville Pedigreed Seed and Delta &Pine Land Company dominated the cottonseed industry and found themselves at the center of this radical transformation in agri-business. The days of small, family owned seed companies ended. Giant transnational chemical companies took control of the industry and exported transgenic crop technology to the world and local actors played a critical role in the process.

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100 Baron and Holm, “Evolution of the Crop Protection Industry,” 305.
102 Baron and Holm, “Evolution of the Crop Protection Industry,” 306.
103 Ibid., 312.
**Rise of the Seed Giants**

By 1980, Stoneville Pedigreed Seed and Delta and Pine Land had accumulated decades of experience in cottonseed breeding. Established in the early 1900s, both programs attracted some of the most talented geneticists in the field. Together, they controlled domestic cottonseed sales, and each had an established international presence. All of these factors made Stoneville Pedigreed and D&PL targets as chemical corporations aggressively sought to acquire seed companies in the 1980s.

In the post World War II years, Stoneville Pedigreed Seed began to focus more attention on international sales. When Roy Meeks arrived in 1965, the company was already shipping to several countries in Latin America. Over the next few years, working through contacts in Texas, Arizona, California, and Mexico, Stoneville became more active in the region. “By the 1970s we were selling to Guatemala and Argentina. We had truckloads of seed going to Bolivia. We kept a salesman flying down all the time,” said Meeks. But, he added, due to the difficulty of enforcing international contracts and collecting debts across national lines “we never sent anything to a foreign country without payment in hand.” Even as the company sought to expand global sales, U.S. customers remained the top priority: “We only had a limited number of seed to serve our domestic market. Then we would serve Mexico. New dealers would be the first shorted on an order if we did not have enough seed.” Another problem involved intellectual property rights. Prior to 1980, plant materials were not protected under U.S. patent law. In fact, Meeks said company leaders were well aware “these countries probably planted Stoneville Pedigree Seed and saved the seed, so that after a few seasons they no longer needed to buy from the
Like the Delta Branch Research Station, Stoneville Pedigreed drew international visitors. In fact, groups arriving to visit one facility in the region often made several stops in the Delta. From the 1970s through the mid 1980s, the seed company hosted groups of 30 to 40 travelers annually from Russia, China, India, and Pakistan. “I remember,” said Meeks, “because I had to order lunches from Kentucky Fried Chicken for them and go pick them up.”

The company had cotton varieties in the field for visitors to see and allowed them to walk through the seed warehouses. Seed theft was a concern, said Meeks, but “we did not search them when they left to see if they took any with them.” The company also served as a source of information: “We educated these countries on acid delinting and advised them on what they needed to do to increase cotton production. The focus was on production.”

In the mid 1980s, executives at the company sensed a change in the industry and considered selling. According to company owner, George Ray Walker Jr., he recognized that "competing in the new world of biotechnology would be difficult for privately-owned businesses like Stoneville." Meeks and Walker met with Monsanto representatives who, Meeks recalled, claimed “they didn’t want to own a seed company.” Stoneville turned to other interested buyers and negotiated a sale with Calgene, a California based company and leader in biotechnology research. In 1986, the deal was finalized from Stoneville’s offices in the Delta where according to Meeks, “We sold the company over a fax machine.” Calgene took one of Stoneville’s patented

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104 Meeks, interview by author, 2016.
105 Ibid.
106 Ibid.

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varieties and used it to introduce genetically modified cotton to the industry in 1995.\textsuperscript{108} George Ray Walker Jr. remained with the company as Director of International Marketing promoting Stoneville’s cottonseed in over 50 countries.\textsuperscript{109} A few years later, Monsanto would own both Stoneville Pedigree Seed and Delta and Pine Land. “Once large companies took control of the small seed breeders,” commented Meek, “everything changed.”\textsuperscript{110}

The Largest Cottonseed Company in the World

Stoneville Pedigreed’s competitor, Delta and Pine Land, also underwent a major transformation. The second half of the twentieth century ushered in a revolution in the textile industry and set the company on a new course. After World War II, the increasing popularity of synthetic yarn led to a decline in the global demand for natural fibers. In order to meet the needs of the changing textile market, British mills shifted from the production of cotton cloth to synthetic fabrics. In 1978, British textile company, Courtaulds—which had grown into one of the world’s largest manufacturers of synthetics—sold its Delta cotton plantation to U.S. investors. Due to the international reputation of D&PL, the transaction captured the attention of the global cotton community. Bill Arnold, former President of the International Division at D&PL, joined the company in 1979. He shared the details of the sale: “US investors paid $45 million for everything—the crop in the field, cattle, land, machinery, seed operation, and gins. Everything.” However, Arnold explained, that was only the first step in what turned out to be a major restructuring of the company. “Three days after the purchase, they sold the entire farming

\textsuperscript{109} “George Rea Walker Jr., former Stoneville Pedigreed Seed Co., president dies,” Delta Farm Press.
\textsuperscript{110} Meeks, interview by author, 2016.
operation—approximately 40,000 acres of land and all the equipment—to Prudential for $42 million. Everything was sold except the seed operation and the town of Scott.”\textsuperscript{111} In the end, U.S. investors acquired a cottonseed company, a few acres of land, and a remote Delta community for approximately three million dollars. In 2007, they sold D&PL to Monsanto for $1.5 billion dollars. In less than 30 years the value of the company increased exponentially based entirely on seed breeding and sales.\textsuperscript{112}

The 1978 sale marked a major turning point in the history of Delta and Pine Land and radically altered the future of the company. For decades the plantation survived off profits from cotton and soybean production and federal farm subsidies, but from this point forward, the American owned D&PL Company focused exclusively on plant breeding to produce new and better performing seed varieties for the commercial market. The breeding program was established in the early 1900s to develop cotton varieties for the British textile industry, a goal never realized. “In fact,” said Arnold, “according to legend, no one can pinpoint a time when a single bale of D&PL cotton was shipped to England.”\textsuperscript{113} Although the seed program failed to meet the needs of the British mills, the company grew into a major provider of cottonseed for American farmers. When the time Arnold joined the company in 1979, D&PL had a well-established reputation for supplying superior cottonseed varieties to the domestic market and benefited from limited exposure to the international market. Growers in South Africa, Columbia, Guatemala, Mexico, and Australia paid a royalty for access to varieties developed at Scott.

\textsuperscript{111} Arnold, interview by author, 2007.
\textsuperscript{113} While large quantities of D&PL were not processed in English mills, in 1952, a company memorandum documented the shipment of 56 bales to England through Staple Cotton Cooperative Association in Greenwood, Memorandum to from Early C. Ewing to Dr. C.R. Sayre, Subject: Magnolia Cotton for Shipment to England, November 27, 1953, Series 4/ Box 32/ File ECE, Sr.& ECE, Jr., Delta and Pine Land Company Records, Special Collections, Mississippi State University Libraries; Arnold, interview by author, 2007.
D&PL provided foundation seed for producers who would grow enough cotton to provide seed for the local commercial market. Due to the international nature of the cotton and textile industries, the seed company attracted an increasing number of visitors each year. They traveled to Scott from across the U.S. and around the world to see first hand the research facility and to explore seed options for their soil and climate conditions. The goal was always maximum production of high quality fiber for the greatest possible profit margin.\footnote{Arnold, interview by author, 2007.}

During the 1980s, the high quality of seed varieties developed at Scott became increasingly attractive to buyers and D&PL’s share of the cottonseed market grew dramatically. As the company profits from the seed sales increased, company executives recognized the need to protect seed varieties that required years to develop. When a tornado destroyed the company’s facility in Kansas, including all records and seed samples from the sorghum seed-breeding program, D&PL took steps to ensure this never happened again. Back in the Delta, the company hired a local contractor to build a seed vault at the Scott facility. The concrete structure resembled a military bunker with mounds of dirt piled against the exterior walls and covering the top. According to Arnold, “it looked a bit like an Indian mound,” which are scattered throughout the Delta. The vault was designed to hold a constant temperature and to control humidity levels. Seed samples from the research and breeding programs were rotated out periodically, planted to test viability, and returned to the vault. It also served as a depository for seed samples from D&PL’s research facilities in Arizona, Texas, California, North Carolina, and Australia. The vault reflected the need to safeguard company investments in capital and research hours in seed development.\footnote{Ibid.}
For years, Stoneville Pedigreed Seed had been the leading supplier of premier cottonseed varieties in the nation, but in the mid 1980s, D&PL surpassed them. Over the years, Stoneville Pedigreed and D&PL had maintained a unique relationship as collaborators and competitors, and both benefitted from a close relationship with seed breeders at the Delta Station. Consequently, the three institutions exchanged germplasm with very specific characteristics, which D&PL used to improve the quality of its cottonseed varieties. “D&PL emerged as a leader in the field both at home and abroad,” explained Arnold, “When you talked about cotton seed—both in the US and the international community—and you said ‘D&PL’ people knew what you were talking about. At this time, D&PL germplasm was the premier germplasm in the world.”

U.S. acreage planted with D&PL seed increased in western states and farmers began to introduce the seed to other regions of the world. For example, said Arnold, “Australia had no native cotton, and California cotton farmers moved to the country and set up operations using D&PL varieties.” Furthermore, D&PL employees traveled to visit test plots and research facilities in South Africa, Australia, and Latin America. In the early 1980s, an affiliate of D&PL sold the Chinese the technology for delinting seed, the process used to remove the fuzz from the cottonseed. The company sent technicians to China to assemble the plant and get it into operation. “I can’t say for sure, but I’m pretty sure they duplicated it,” said Arnold. In 1988, executives recognized the potential for global expansion and established an international division at D&PL.

Delta and Pine Land’s exponential growth took place at the same time that chemical

companies began to realize the future potential of bioengineered seed. Giant agri-businesses initiated research programs to find a viable way to manipulate the DNA of cotton to produce plants resistant to insects, diseases and even herbicides. If successful, GM seed—now guaranteed patent protection under the 1980 Supreme Court ruling—could capture part of the lucrative domestic and international chemical market. There was a great deal of research conducted in labs across the country as biologists searched for a way to introduce new DNA into a plant cell. At Cornell University scientists developed a “gene gun” to insert DNA coated metal particles into the plant cells. According to Arnold, “they were coating gold dust with plant DNA and loading it into a cartridge—similar to those used in a shot gun—and literally shooting it into the plants in hopes the DNA on the gold dust would penetrate the cell wall and attach to the DNA of the plant.”117

Many companies invested in biogenetic research, but Monsanto’s early massive investment of capital catapulted the company to dominance in the field. In 1983 the company announced it had successfully grown genetically altered petunias, a first in bioengineering.118 Recognizing the profit potential of genetically modified plants, Monsanto poured millions more into research and development. By 1988 they topped the list of spending on agri-biotechnology of the most competitive 25 companies in the field with an estimated $55 million investment, double the amount of second ranked Shell.119 The investment paid off. Monsanto developed a viable process for altering the DNA of the cotton plant and other crops including soybeans and

117 In the 1980s, researchers at Cornell University, in collaboration with DuPont, developed a “gene gun” for inserting DNA into cells. The process was referred to as bioballistics. For information on the process see Roger Segelken, “Biologists invent gun for shooting cells with DNA,” Cornell Chronicle 18, no. 33 (1987): 3; Arnold, interview by author, 2007.
118 Yafa, Cotton: Biography of a Revolutionary Fiber, 269.
corn. But in order to commercialize the technology, the company needed a seed business. In the early 1990s, Monsanto and D&PL formed a partnership. Using Monsanto’s gene technology and D&PL’s advanced seed breeding program, the companies collaborated to develop a cotton variety resistant to insects.

Bollworms and budworm damage led to a substantial drop in profit margins and created a serious problem for cotton growers during this period. D&PL partnered with Monsanto, a leader in agricultural research, to produce bollworm resistant cotton. Scientists inserted a gene from a soil born bacteria, *Bacillus thuringiensis* (*Bt*), into the cottonseed. When the seed matured and bollworms attacked the plant, the new gene produced a toxin that killed the insects. The genetically modified seed were referred to as “Bt cotton.” In order to produce enough bollworm resistant cottonseed as quickly as possible for the commercial market, the partners looked to South African farmers to increase seed production. ”We got into South Africa in a big way,” said Arnold. African growers visited the facility at Scott and the company’s breeders and field technicians traveled to South Africa to oversee progress. By taking advantage of the growing season in the southern hemisphere, D&PL produced twice the seed in half the time traditionally needed to supply the market. South African cotton growers planted D&PL cotton and shipped the seeds back to Scott where they were processed for sale.

In 1996, the leading cotton breeding facility in the country, supported with Monsanto capital and gene technology, introduced genetically modified seed to the commercial market.

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121 Arnold, interview by author, 2007; “Roger Malkin, Ag Visionary, Dies.”
The development of a commercially viable transgenic seed had been greatly anticipated and discussed since the early 1980s, and genetically modified cottonseed caught the attention of the global agricultural community. Journalist Stephen Yafa described the profound and far-reaching implications of bioengineered seed:

Monsanto’s biotechnology revolutionized the industry… Overnight, all pliers and wrenches down in your workshop became useless for swapping parts out. A genetically modified cotton seed looked identical to the unleaded variety, but within its hull it contained the ability to tolerate Monsanto’s weed killing herbicide as well the ability to ward off the menacing tobacco budworm, bollworm, and pink bollworm, all of which had been feasting on cotton for more than a century…Biotech was God’s way of reminding cotton farmers that the world of genetic science was about to pass them by in a nanosecond unless they caught this midnight express to the future. They did…

As a result of the relationship with South African growers, D&PL garnered increased attention in the region, but the most enticing market was China.

The partners acted aggressively to break into Chinese cottonseed market. Many were concerned the technology might be stolen and duplicated, so D&PL teamed up with Monsanto to open up commercial markets for profit before the science was replicated. “This was not just a one way street,” explained Arnold, “there were companies and government entities that sought out and were interested in establishing a business relationship with D&PL and Monsanto in order to benefit from this new technology.” Years earlier, beginning in 1978, the same year the British sold D&PL, the Chinese government had initiated sweeping economic reforms. Transforming its agricultural sector was a top priority for the Chinese, and officials became much more receptive to outside sources of agri-science and technology. By the mid 1990s, the country was a prime market for transnational chemical companies. And due to the fact that the Chinese had a larger

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124 Yafa, Cotton: Biography of a Revolutionary Fiber, 277.
bollworm problem than the U.S., the commercial market for insect resistant genetically modified cottonseed was ripe.

Bill Arnold, and his D&PL team traveled to China to seek out viable business partners and begin the tedious process of sorting out the requirements of international law, navigating cultural differences, and meeting the demands of the Chinese government. The business venture turned into a long and complicated process. Arnold and his team did not know which entities or companies to approach. Finally, working through company contacts in Singapore, the team managed to hire a Chinese official from the Ministry of Agriculture to work as their key person in the country. The Chinese representative along with Arnold’s team traveled to targeted areas of the country to find viable business partners and narrowed their search to the Yellow River Valley—a major cotton-producing region in China. The first trip lasted 30 days and subsequent visits were shorter and always “strictly business.” In turn, the partners hosted Chinese delegations from two provinces at D&PL breeding facilities in Scott and Monsanto corporate headquarters in St. Louis. They narrowed the list of potential Chinese partners to a small pool—many of which specialized in breeding cotton—and initiated serious negotiations. According to Arnold, talks with the group from the Shandong province fell apart in just a few hours, so they started the process over with another delegation. This cycle continued until Arnold and his team found a Chinese seed company in the Hebei Province they could partner with to market transgenic cotton in the country.

Over a period of eighteen months the D&PL group made 13 trips to China, and attorney Jerry Hafter was a critical member of the negotiating team.  

Hafter grew up in Greenville, Mississippi, where his family was part of the dynamic Jewish community in the river town. He

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graduated from Greenville High School in 1963 as valedictorian of his class and remained a passionate and active supporter of the public school system for the rest of his life. Hafter graduated from Rice University in 1967 followed by two years at Oxford University as a Marshall Scholar. In 1969, he entered Yale Law School where fellow classmates included Hillary Rodham and Bill Clinton. After graduation, he returned to Mississippi and joined his father’s law firm where he served as outside general counsel for D&PL. During the trips to China he attended negotiations during the day and drafted contracts into the night.\textsuperscript{126} As a pioneer in the field, the company had to determine the terms under which the technology would be marketed globally and take steps to protect intellectual property rights. Hafter was the legal mind behind the negotiations. He went on to become a highly respected legal expert in the areas of business, corporate, and agricultural law, biotechnology, and intellectual property licensing.\textsuperscript{127}

Months of talks with the Chinese culminated in a final round of constant negotiations. An agreement was reached, and the Mississippi delegation traveled to China for the elaborate signing ceremonies. Still numb from years of traveling around the world, cultivating global contacts, navigating the labyrinth of international law, learning local customs, and communicating with foreign governments, Arnold returned to the U.S. exhausted. He arrived at his offices in the Delta, where a wave of anxiety swept over him: “I got back to Scott and had this contract and realized now I had to execute it.”\textsuperscript{128} As he pored over the documents, wondering how to reconcile the political and cultural nuances of the Chinese and American


\textsuperscript{127} On seed patents see Winston, \textit{Travels in the Genetically Modified Zone}, 186-193, 180-182; Arnold, interview by author, 2007; “Q & A With Phelps Dunbar’s Jerry Hafer,” \textit{Law360}.

\textsuperscript{128} Arnold, interview by author, 2007.
business communities, the phone rang. A representative from nearby Delta State University called to ask if Arnold might be able to help one of their graduates, a Chinese student who, after earning a PhD in education, had failed to find work and he and his family and did not want to return to China. Arnold scheduled a meeting for that very afternoon and “within thirty minutes, I hired him.” Having an employee to bridge the cultural and linguistic gaps between Deltans and their Chinese partners proved to be an invaluable asset in dealing with language barriers and hosting Chinese delegations arriving in the Delta. “Every month or so there would be another group of 10 to 15 at a time including businessmen and researchers,” recalled Arnold. “They traveled with their own interpreters, but having an in house interpreter just blew them away! You could see it on their faces.”

Once established, the Chinese venture led to contracts for seed testing and production in other provinces and the company increased efforts to commercialize transgenic cotton on a global scale. D&PL had established a presence in Australia decades earlier when the company provided foundation seed and farmers engaged in seed increases for the company. The relationship changed in the late 1990s when D&PL set up their own seed facility and assumed control of operations in Australia. The new business arrangement set off yet another round of international exchanges. D&PL technicians traveled to company facilities in the country and Australian visitors came the Delta. The company explored new markets in Zimbabwe, Greece, Spain, Turkey, Brazil, Argentina, Colombia, Mexico, Pakistan, and India. They negotiated business arrangements with partners in Greece, Turkey, and Spain where the company set up a system of distributors, sales representatives, and product development lines. Marketing and

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129 On the impact of Bt cotton on small farmers in China and production in South Africa see productivity statistics in Paarlberg, Starved for Science, 114-115; Arnold, interview by author, 2007.
research continued in South Africa, and D&PL entered in joint business ventures with groups in Brazil and Argentina.\textsuperscript{130}

In 1997, D&PL explored the possibility of marketing GM cottonseed in Zimbabwe. During the trip, Arnold and his team had to vacate their hotel rooms to provide space needed to accommodate First Lady Hillary Clinton along with her staff, security, and support team. Under the Clinton Administration, a comprehensive program was adopted to increase U.S. support for democracy and development in Africa.\textsuperscript{131} Arnold recalled that Hafter, who had maintained a relationship with Clinton, tried to make his way through the crowd and security to speak with her but failed. Ultimately the company decided against doing business in Zimbabwe due to the volatile political climate under President Robert Mugabe.\textsuperscript{132}

By the late 1990s, visitors from Australia, South America, England, and China and other countries traveled to Delta and Pine Land headquarters in Scott on a regular basis, and employees made periodic visits to the firm’s breeding programs and sales partners in 18 countries around the world. As the decade drew to a close, D&PL had experienced more than a

\textsuperscript{130} For information on the early adoption of genetically modified crops outside the U.S. see Paarlberg, \textit{Starved for Science}, 12-13, 146, 179-195; Lambrecht, \textit{Dinner at the New Gene Café}, 207; Arnold, interview by author, 2007.

\textsuperscript{131} The initiative included improving and establishing trade relations, increasing financial aid, supporting democratic regimes, and putting systems in place to address the HIV/AIDS crisis. President Clinton and the First Lady visited Africa countries to promote their policies. The Clinton Administration initiated a comprehensive effort to support democracy and development in Africa. The initiative included improving and establishing trade relations, increasing financial aid, supporting democratic regimes, and putting systems in place to address the HIV/AIDS crisis. President Clinton and the First Lady visited Africa countries to promote their policies regarding Africa. Officials in the Administration followed suit and increased their focus on Africa: Vice President Al Gore visited the continent four times and Secretary Madeline Albright traveled to Africa at least 7 times. A U.S. Department of State report on the Clinton Administration’s record on Africa states: “It is not an exaggeration to say that no Administration has devoted more time, effort, or attention to Africa.” The interest in promoting development in Africa continued into Clinton’s post presidency years with the Clinton Global Initiative. Former President Jimmy Carter has also worked tirelessly to address poverty and suffering in Africa. He enthusiastically supports the adoption of genetically modified crops to in Africa. For the full report see “History of the Department of State During the Clinton Presidency,” U.S. Department of State Archive, Office of the Historian, Bureau of Public Affairs, \url{http://2001-2009.state.gov/r/pa/ho/pubs/8531.htm} (retrieved July 10, 2014). For information on President Jimmy Carter’s position on bioengineered crops in Africa see his forward, co-written with Norman Borlaug, in Paarlberg, \textit{Starved for Science}, vii-x.

\textsuperscript{132} Arnold, interview by author, 2007.
decade of unprecedented growth both in the domestic and global seed market. The company once touted as the “largest cotton plantation in the world” had been transformed into the largest cottonseed company in the world, a leader in developing and marketing cutting edge transgenic crop technology around the globe. The following year it all began to fall apart.

**Travelling in the “Genetically Modified Zone”**

In 1998 two events galvanized the anti-biotech community and resulted in virulent global attacks on D&PL and Monsanto. The first occurred in March, when D&PL and the U.S. Department of Agriculture were awarded a patent for their Technology Protection System (TPS). The product of a joint collaboration in bioengineering, the technology rendered seeds sterile after a single growing season. In other words, farmers could not save the seeds from year to year for replanting. Besides providing a built in patent protection system for seed companies, proponents of TPS explained that a majority of farmers had been purchasing new planting seed each year for decades and revenue from seed sales would fund additional research. Supporters also claimed the new technology would prevent bioengineered seed from contaminating fields planted in non-GM crops, which had been a primary concern of environmentalists opposed to transgenic technology. They also suggested sterile seed provided a safeguard U.S. farmers from unfair global competition as producers in other countries would not be able to save seed for replanting to lower their cost input.

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134 Taken from title of the book by Mark Winston, *Travels in the Genetically Modified Zone.*

The agriculture community referred to the latest transgenic product as TPS, but anti-biotech activists and journalists created a label of their own—the “Terminator” gene. The pejorative reference proved to be a language coup for adversaries of bioengineering. Few people had the time or inclination to sort out the science behind sterile seeds, but due in part to the popularity of Arnold Schwarzenegger’s action films, the word “terminator” had universal meaning. In fact, use of the term became so widespread even the agricultural community adopted the label. Critics had a great deal to say about Terminator technology. Sterile seeds, they argued, might not present a major problem for U.S. farmers who purchased new planting stocks each year, but Terminator technology could have serious ramifications in poor and developing countries where small farmers saved their seeds to plant the following season. When activists associated the technology with global economic oppression and corporate greed, negative media coverage intensified and spread across Europe, India, Asia, and Africa. Headlines read: “New Seed Technology Threatens Third World,” another referred to the technology as “The Demon Seed,” and a report appeared in Time magazine titled “The Suicide Seeds.”

The second event proved even more disturbing for the anti-biotech community. A few weeks after the Terminator patent was issued, Monsanto and D&PL announced plans to merge the two companies for an estimated $1.5 billion payout to the seed company. When anti-biotech activist Hope Shand read about the proposed Monsanto buyout of DPL she said, “Alarm bells started to sound. People had never hear of D&PL, but with Monsanto, they understood this was a serious threat with moral implications.” While the partners awaited Justice Department

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136 Lambrecht, Dinner at the New Gene Café, 116-117.
approval of the merger, activists mobilized. Many had watched with growing alarm the rapid pace of restructuring in the global agri-business community during the previous decade as chemical corporations recast themselves as “life-science” companies and spent billions of dollars “gobbling up the world’s seed companies like starved dogs.” Larger corporations absorbed smaller companies or forced them out of business altogether.139 “Gene Giants,” including DuPont, Novartis, and AstraZeneca, enlarged their agricultural divisions. Dow alone purchased five agri-businesses, three in Brazil, one in Argentina, and stake in another in France, and Syngenta acquired nine seed companies, but none were more aggressive than Monsanto.140 Between 1996 and 1998, the company spent $8 billion purchasing soybean, cotton, corn, canola, and seed companies around the world.141 Monsanto acquired Stoneville Pedigreed Seed in the Delta in 1997 and the merger with D&PL would give the company control of the cottonseed market even as it moved to acquire DeKalb, the second largest supplier of corn seed in the nation.142 A transnational corporation with monopoly control of the world’s seed supplies and patent rights for Terminator technology could dominate global agriculture, an unprecedented and alarming concentration of power in the agri-community.143

The Terminator controversy combined with the proposed buyout deal led to intense scrutiny and unrelenting attacks on Monsanto and D&PL. “Protest needs symbols,” explained biology professor, Dr. Mark Winston, and “Monsanto came to symbolize the worst of the

139 Lambrecht, Dinner at the New Gene Café, 112-113; Winston, Travels in the Genetically Modified Zone, 31.
140 Numerous sources document the consolidation process. This description of the agri-business mergers and buyouts hardly begins to explain the complicated process and the number of companies impacted during this period of unprecedented consolidation that continues to the present day. For general information see Winston, Travels in the Genetically Modified Zone, 31-32, 52; Lambrecht, Dinner at the New Gene Café, 110-113, Schurman and Monro, Fighting for the Future of Food, 35-36.
141 On the aggressive culture at Monsanto see Schurman and Monro, Fighting for the Future of Food, Chapter 2.
142 Lambrecht, Dinner at the New Gene Café, 113.
143 Lambrecht, Dinner at the New Gene Café, 113; Winston, Travels in the Genetically Modified Zone, 214; Schurman and Monro, Fighting for the Future of Food, Chapter 2.
multinational corporations.” Utilizing the internet, activists across the globe waged a massive campaign against the companies that yielded results: a bank in Bangladesh terminated its partnership with Monsanto to provide loans and agri-technology to small farmers in the country, the leading scientist at the pro-GM Rockefeller Foundation, Dr. Gordon Conway, publicly criticized Monsanto’s board members for the company’s overly aggressive tactics in pushing out new products, and the U.S. Department of Agriculture, under pressure both at home and from abroad, placed restrictions on Delta &Pine Land’s ability to commercialize Terminator technology. Stunned at the scope and severity of the attacks, Monsanto announced the company would not commercialize genetically sterile seed. The announcement angered executives at D&PL who claimed the technology had been “misrepresented.” The relationship between the two companies began to deteriorate. Later in the year, anti-globalization activists traveled to Seattle, Washington, site of the World Trade Organization Ministerial Conference, to rally against liberal trade policies many believed promoted the interests of global corporations at the expense of national and local economies, labor, the environment, and consumer safety. Protesters filled the streets and National Guardsmen and riot police were activated. The “Battle for Seattle” represented the growing international resistance to the global capitalist system and aggressive transnational corporations that benefitted from trade liberalization, including the global agri-biotechnology industry.

In December of 1999, less than two weeks after the WTO riots in Seattle, Monsanto withdrew the buyout offer. D&PL promptly sued their biotech partner for one $1 billion in

damages.\textsuperscript{148} Bill Arnold and other D&PL employees were summoned for depositions and litigation continued for years even as the companies continued to collaborate in developing and marketing advanced GM crop technology. The year ended with yet another blow to the agri-biotech community when, on December 31\textsuperscript{st}, the eve of the millennium, anti-GM activists set fire to biotech labs on the campus of Michigan State University. With financial support from the United States Agency for International Development (USAID), researchers at the university had provided agri-biotechnology to developing countries for almost a decade. Approximately $20 million in state and federal resources had been invested to insure food security in Egypt, Indonesia, Kenya, and other developing nations. A few weeks later an anti-biotech organization, the Earth Liberation Front, claimed responsibility for the fire.\textsuperscript{149} Fringe groups had taken the protest movement to another level—bioterrorism.

As the world entered a new millennium debates over international trade and development, humanitarian aid, and the environment grew more heated. Anti-biotech groups were part of the growing international backlash against the accelerated pace of globalization. Resisters organized themselves into powerful protest organizations including Greenpeace International, Friends of the Earth, Rural Advancement Fund International (RAFI), International Organization of Consumers Union, Seed action Network, Oxfam, Committee for Responsible Genetics, and the International Coalition For Development Action (ICDA).\textsuperscript{150} Collectively known as non-governmental organizations, the size and number of these organizations exploded

\textsuperscript{150} Schurman and Monro, \textit{Fighting for the Future of Food}, Chapter 3.
In the 1990s. In April, 2000, environmentalists around the world celebrated the 30th anniversary of Earth Day, while seven of the largest biotech companies announced a $50 million dollar public relations campaign to promote the safety and benefits of bioengineered commodities. A few months later, GM supporters at the Rockefeller Foundation celebrated the long awaited introduction of bioengineered “golden” rice, and the cover of TIME read, “THIS RICE COULD SAVE A MILLION KIDS A YEAR.” In the fall of 2000, Norman Borlaug, the “Father of the Green Revolution” and one of the most influential supporter of GMOs, returned to Oslo, Norway, where thirty years earlier he had received the Nobel Prize for his contributions in the field of science based agriculture. In his lecture, he argued that the adoption of agri-biotechnology was essential for reducing global poverty and increasing food security—particularly in Third World countries. Borlaug insisted the debate “between agriculturalists and environmentalists over what constitutes ‘sustainable agriculture’ in the Third World” must end. “The deadlock must be broken.” The year ended with the contentious U.S. presidential election of 2000; another indicator of the divisive climate of the period.

A few weeks after George W. Bush was inaugurated, bioterrorists struck again and this time D&PL was the target. Even though the controversial merger had been called off, the company’s relationship with Monsanto and continued interest in marketing Terminator technology made it a primary focus of anti-biotech activists. In early morning hours of February 28, 2001, a fire at D&PL facilities in Visalia, California, destroyed a seed warehouse and damaged the gin. Early reports indicated the fire had not been an act of arson, but that was not

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151 Ibid.
152 Lambrecht, Dinner at the New Gene Café, 9, 67.
153 Ibid., 68.
the case.\textsuperscript{155} As they had done earlier in the attack on the Michigan State University campus, the Earth Liberation Front issued a statement claiming responsibility for the fire. “We chose this warehouse because it contained massive quantities of transgenic cotton seed in storage. But now, this seed will no longer exist to contaminate the environment, enrich sick corporations, or contribute to its warped research programs.”\textsuperscript{156} The statement also included an ominous warning: “This action by the ELF comes after a quiet winter of no direct actions against genetic engineering. It is expected that with the upcoming growing season direct action against facilities producing and testing genetically engineered organisms will resume.”\textsuperscript{157}

\textbf{Zambia Revisited}

To understand the Zambian refusal of genetically modified food aid with millions of lives at risk requires a comprehensive assessment of the historical context in which the event took place. The famine in Zambia occurred at the peak of the anti-globalization movement antibiotech movements.\textsuperscript{158} In July of 2001, an estimated 200,000 participants in the anti-globalization movement gathered in Genoa, Italy, site of the G8 Summit, a meeting of eight of the world’s most powerful countries to discuss global issues and initiatives. The protests turned violent with at least one fatality and hundreds arrested and injured.\textsuperscript{159} When Richard Ragan arrived in Zambia one month later, the small African nation was poised to become the site of

\textsuperscript{157} Message from Earth Liberation Front after burning D&PL warehouse in Lambrecht, \textit{Dinner at the New Gene Café}, 124.
\textsuperscript{158} Schurman and Monro, \textit{Fighting for the Future of Food}, xiv.
global contestation over who would control the globalization process and the terms under which it would proceed.

At the local level, the Zambian people were experiencing a life threatening food shortage, but in a broader context the country was caught in the cross hairs of multiple power centers vying for control and influence on the global stage. There had been a growing backlash against genetically engineered commodities for almost three decades, but the rapid adoption of GM crops in the five years leading up to the famine polarized the global scientific community and energized environmentalists. Between 1996 and 2001, the number of acres planted in the four primary GM crops—corn, soybeans, canola, and cotton—grew from over 4 million acres in just six countries to 130 million acres in thirteen countries. The rapid adoption rate of biotechnology combined with the aggressive tactics of multinational corporations set off protests and debates over global health, sustainable agriculture, biodiversity, and the oppressive power of multinational corporations.

Another reason Zambia became the epicenter of the debate over biotechnology involved the ongoing struggle between the United States and her economic allies and the increasingly anti-GM European Union to control international trade. In less than two decades the European Union had become one of the most powerful economic trading blocs in the world usurping some of the global influence of the U.S. and, in turn, the nation’s ability to the shape the rules of global governance and international trade through the World Trade Organization. One of most contentious areas of disagreement between the U.S. and European Union involved the exchange

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160 Schurman and Monro, Fighting for the Future of Food, xii.
161 Ibid.
162 Paarlberg claims the strict regulatory guidelines adopted in rich European nations were exported to poor African nations dependent on trade with EU nations. See Paarlberg, Starved for Science, 182-183.
of agricultural products, including genetically modified commodities. The conflict over GM food aid in Zambia was to some degree a proxy war between the pro-GM U.S. and anti-biotech European countries.\(^\text{163}\)

European countries and NGOs courted allies in their resistance to biotechnology and Dr. Mwananyanda Lewanika proved to be one of the most important actors in the crisis. Work on the Cartagena Protocol on Biosafety brought Lewanika and the Norwegians together where he agreed to collaborate to wage a public campaign to against biotechnology. In return, Lewanika would receive funding for Zambia’s National Institute for Scientific and Industrial Research where he served as executive director. At the height of the Zambian food crisis, Lewanika was part of the delegation that traveled on a “fact-finding” trip to the U.S. and Europe. The trip failed to sway the Zambians and Lewanika explained the group had been particularly impressed with Norway, an anti-GM country. With the support of Zambian officials, Lewanika proclaimed GM food a danger to public health and issued the final refusal of genetically modified food aid for the Zambian people.\(^\text{164}\)

One of the factors that influenced the Zambian refusal of GM food aid was lack of early exposure to biotechnology. More prosperous, advanced countries followed the development of bioengineered plants through the 1980s and 1990s—well before genetically modified seed entered the commercial market. In anticipation of these new products, several countries including the U.S., Canada, Australia, Japan, Argentina, Brazil, Mexico, South Africa, and even the European Union, began the process of approving selected GM crops before the technology

\(^{163}\) \text{“The battle in Seattle,” The Economist.}
\(^{164}\) Paarlberg, \textit{Starved for Science}, 141-146, 126.
became available to farmers.\textsuperscript{165} While most African nations, including Zambia, were not early adopters of biotechnology, South Africa was the exception. Due to the country’s climate and soil conditions, South Africa embraced science-based agriculture far earlier than other countries in the region. Many transnational biotech companies benefitted from dual season field trials and seed increases in South Africa, including D&PL.\textsuperscript{166} In the words of Bill Arnold, “We got into South Africa in a big way.”\textsuperscript{167} African nations exposed late to the technology tended to adopt the more stringent guidelines of their European trading partners and anti-biotech NGOs.\textsuperscript{168}

The debate over biotechnology continued after the crisis in Zambia subsided. In January 2003, Norman Borlaug, renowned professor of international agriculture and former recipient of the Nobel Peace Prize, published a scathing commentary in \textit{The Wall Street Journal} titled “Science vs. Hysteria.” Borlaug criticized President Levy Mwanawasa along with anti-biotechnology groups—and particularly the European Union—for their role in the Zambian food crisis: “If low-income, food deficit nations—which desperately need access to the benefits of science and technology—are being advised by governments and pressure groups in privileged nations to reject biotechnology, based on ideologically inspired pseudo-science, there is reason for serious concern.”\textsuperscript{169} He claimed the “most prestigious national academies of science in North America and Europe including the Vatican” had declared their support for genetically engineered crops in order to ensure adequate and affordable global food stocks. “Responsible biotechnology is not the enemy,” declared Borlaug, “starvation is.”\textsuperscript{170} The following year, the Norwegian Nobel Committee awarded the Peace Prize to Wangari Maathai, an environmental activist from Kenya.

\textsuperscript{165} Ibid., 12.
\textsuperscript{166} Paarlberg, \textit{Starved for Science}, 12-13, 146.
\textsuperscript{167} Arnold, interview by author, 2007.
\textsuperscript{170} Ibid.
In her Nobel Lecture, she argued in favor of a “holistic approach to development” in Africa with more emphasis on biodiversity and the use of “indigenous seeds and medicinal plants.”

In 2004, the World Food Programme sent Richard Ragan to North Korea where he oversaw the largest feeding program in the world supplying food aid to approximately 10 million people, almost half the country’s total population. More than a dozen non-governmental organizations provided additional support including medical supplies and services, agricultural programs, and clean water projects. Problems arose in the fall of 2005 when European aid groups reported incidents of torture, forced labor, and public executions of political dissenters. When the European Union along with 40 co-sponsors submitted a formal complaint to the United Nations, North Korea ordered all groups that received funding from the EU or a member nation to leave the country. Ragan negotiated with U.N. and North Korean officials for permission to continue to feed women and children, but failed to reach a compromise. In the end, all international aid groups were expelled from the country. Looking back, Ragan compared his experience in Zambia with conditions in North Korea and what he viewed as a total lack of concern on the part of government officials in both countries for the welfare of their people: “The U.S. had shipped a large donation of [GM] corn, but the Zambian government refused it... Here were thousands of tons of food aid in a famine situation, with the government saying they wouldn't accept it. That was my preparation for North Korea.” Ragan summed up his political philosophy in a simple

174 Ragan, attachment in e-mail message to author, 2007; Ragan, interview by author, 2009.
statement, “A hungry child knows no politics.”

Mississippi Delta institutions, businesses, and individuals facilitated the globalization of science based agriculture and biotechnology. The Delta Branch Experimentation, Stoneville Pedigreed Seed, and Delta and Pine Land—along with other Delta based agri-businesses—engaged in international exchanges to advance commercial agriculture in the U.S. and abroad. Federal, state, and private funds contributed to the growth of an advanced agri-business research community in the Delta. Local entrepreneurs merged science with capitalism and exported American style agriculture to many regions of the world. Almost a century of advanced seed breeding in the Delta contributed to the biotech revolution of the twentieth century. By 2006 twelve developing nations had approved GM crops, seven of which were Latin American countries with a history of interactions with Delta based businesses. Those countries included Argentina, Brazil, Paraguay, Uruguay, Mexico, Colombia, and Honduras. Whatever the impact, Delta institutions contributed to the adoption of GM technology in Latin America, South Africa, and China and many other nations across the globe. In 2006, Monsanto and D&PL made headlines again when the agri-giant announced a second attempt to buyout D&PL for $1.5 billion in cash. The deal was finalized in 2007.

While Delta entrepreneurs inserted themselves in the global seed market and aggressively promoted the international adoption of GM crop technology, they acted to restrict foreign competition to the Delta catfish industry. Deltans leveraged their political power to erect trade barriers to protect local producers and in the process contributed to an international dispute over

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176 Winston, *Travels in the Genetically Modified Zone*, 34.
fair trade and freed trade policies that had implications far beyond the agricultural sector. In both the seed and catfish industries, local agents sought to gain an edge in the international market and control of the transnational flow of goods and technology.
CHAPTER V
CATFISH CAPITAL OF THE WORLD

“Aquaculture is the future.”
Jason Clay, expert on global agriculture and aquaculture, Senior Vice President of Market Transformation at the World Wildlife Federation

“It’s a dead business. People can eat imported fish just as they use imported oil.”

“We couldn’t wait for it to rain!” declared retired Delta farmer, James Lindsey. “We’d grab our poles and head down to the bayou to fish,” he added, referring to the waterway at the back of his property near the town of Merigold. “That bayou was full of catfish!”

Driving through the region today, one can still catch sight of Deltans, usually elderly and often with grandchildren nearby, fishing in the small bayous just off the main roads. The sight conjures up images of a crowd gathered at a catfish fry eating fillets from paper plates soaked with grease and ketchup in the sweltering Delta heat. But during the past five decades, the southern catfish has undergone a radical transformation. Delta native and author Julia Reed described the change in an article published in The New York Times in 2010: “A new breed of cat” has emerged and this fish bears “almost no resemblance to the omnivorous, mud-loving bottom feeders my father and

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1 Jason Clay quoted in James E. McWilliams, Just Food: Where Locavores Get It Wrong and How We Can Truly Eat Responsibly (New York: Little, Brown and Company, 2009), 155.
3 James Lindsey (retired Delta farmer) in discussion with the author, Merigold, Mississippi, February 21, 2010.
I fished for when I was little.” The fish served in restaurants across the nation and around the world today derives from a modern aquaculture industry complete with its own research scientists and engineers who specialize in catfish gene pools and diseases, formulate feed that insures maximum flavor and development, and design high-tech equipment to keep oxygen levels constant in thousands of acres of man-made ponds across the South. According to Reed, 630 million tons of catfish were processed in the U.S. in 2002, and the economic impact of the industry on the state of Mississippi in that year alone was over two billion dollars, a new breed indeed.  

The shallow man-made catfish ponds in the Mississippi Delta give little indication of the complex history of the industry and the pivotal role Delta aquaculture has played in both the local and global economic systems. Few would suspect that Delta catfish producers and processors have been deeply embroiled in ongoing international debates over fair labor practices, sustainable food production, product labeling, and international trade agreements. The question, then, is how did this happen? How is it that a cheap food source produced in the poverty-stricken Delta for domestic consumption raised vital social, economic, and political questions that transcended regional and national boundaries? In other words, what forces and agents came together at a particular historical time and place to propel the “peripheral” Mississippi Delta catfish industry to the “center” of the evolving world capitalist system?

**Becoming the Catfish Capital of the World**

In the years following World War II, Delta farmers reorganized their operations to meet

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5 Ibid.
the demands of the postwar global market. In his comprehensive study of Southern agriculture, Gilbert Fite documented this revolutionary shift from cotton production to livestock and grains, which ushered in resounding changes as farming was restructured into “a highly capital-intensive, diversified, mechanized, and labor-efficient” industry.\(^6\) Cotton took a particularly hard hit in the postwar years as rayon increased in popularity and decreased in price. In addition to the competition from synthetic fibers, U.S. growers were under economic pressure from increased production in Brazil, China, and India, along with traditional cotton producing nations.\(^7\) Cotton was losing its grip on the South. In his study of land use after World War II, Fite found that “one of the most significant changes was the permanent decline of cotton acreage and the final demise of cotton as the South’s major cash crop, except in a few areas such as the Mississippi Delta.”\(^8\)

In the Delta the changes were striking. For example, the largest plantation in the region, Delta and Pine Land Company, decreased its cotton acreage from a peak of 16,000 acres to 7200 acres by 1969. The company used the rest land raise soybeans, rice, green beans, and corn, with a few acres converted to pastures.\(^9\) Cotton remained the primary cash crop in the region, but unpredictable price fluctuations in the global marketplace, combined with sheer determination to wrestle a living from the land, drove Deltans to experimentation. Much like present day investment portfolio managers, farmers turned to diversification seeking higher profit margins.


\(^7\) Fite, *Cotton Fields No More*, 175.

\(^8\) Ibid., 194.

and economic stability. If cotton prices dropped, they could survive for another year on the income from other agri-businesses. Over the years, commercial farming ventures in the Delta grew to include rice, soybeans, corn, winter wheat, and milo cultivation. A few Deltans purchased dairy and beef cattle or chickens for poultry farming. Others planted sweet potatoes, pumpkins, pecan trees and the region saw an increase in cucumber cultivation.

Dairy and poultry farming expanded rapidly in the Delta during the 1940s and 1950s, a time many remember well. As he turned off Highway 61 and drove east, James Lindsey pointed to the former sites of seven dairy farms in less than three miles, some with feed silos still standing, “Folks went to Wisconsin to buy Holstein cows because, at the time, that breed of cow produced more milk.” Along with the dairy barns, long poultry sheds that housed broilers were a common sight in the postwar years. “The trucks came at night to pick up the chickens,” recalled Lindsey. “We had to wait until nighttime because the chickens slept at night and were easier to catch. Folks would let their neighbors know that the truck was coming, and they would help each other catch the chickens and put ‘em in crates and load ‘em onto the truck to take ‘em to the processing house. You talk about a nasty job! There’s nothing nastier than a chicken! There was money in chickens at first, but that changed.”10 The same was true for beef and dairy cattle, sweet potatoes and pickles. Over time, the markets shifted, but Delta farmers continued to find innovative ways to use their land.

By the mid to late 1960s, beef cattle, poultry and dairy farms had almost completely disappeared from the region, and landowners searched for novel ways to capitalize on marginal land, diversify production, and deal with the volatile international commodities markets, a

10 Lindsey, in discussion with the author, 2010; Fite, Cotton Fields No More, Chapter 9: “Modernization Comes to Southern Farms,” 181-205.
pattern repeated throughout the region’s history. Some increased their soybean acreage while others began to experiment with rice farming, a fledgling industry still in its infancy. For a few Delta farmers, aquaculture seemed like the answer.\textsuperscript{11}

The Delta’s flat land and abundant water supply provided the essential tools for commercial catfish production and a few rogue farmers made their first attempts at pond construction in the mid 1960s. Grain embargoes, skyrocketing oil prices, rising interest rates, and declining demand for cotton contributed to chronic economic instability in agricultural sector. According to Reed, economic pressure led to the rapid rise in aquaculture in the Delta: “In the 1970’s and 80’s, when Mississippi farmers were facing the worst depression since the 1930’s, many of those who could still get a bank loan decided to trade in their soybeans and cotton seeds for fish fingerlings and started digging ponds.”\textsuperscript{12} The results were impressive. In 2010, the Mississippi State Extension Service reported that “Catfish is the leading aquaculture industry in the United States,” and 94% of all catfish were raised in four states: Mississippi, Louisiana, Arkansas, Alabama, with Mississippi producing more fish than the other three combined. The Delta had over 80,000 acres in ponds and led the nation in catfish production, an industry that had a $2 billion dollar impact on the state. Based on these statistics, the small Delta town of Belzoni, Mississippi had a legitimate claim to the self-imposed title, “Catfish Capital of the World.”\textsuperscript{13}

\textsuperscript{12} Reed, “Cat Fight.”
Twenty years after the first harvest, the Delta catfish industry enjoyed economic success along with a positive public image, no small feat for a region best known for racial violence, staunch resistance to integration, and dire poverty. Catfish production brought a glimmer of hope to a region in desperate need of revitalization. An entire infrastructure, including fish hatcheries, transport services, feed production facilities, and processing plants, grew up around the industry. Catfish provided a viable option for diversification, reduced agri-chemical use and dependence on farm subsidies, and created much needed jobs for an unskilled labor force—all while providing a clean food source for the world’s growing population. Many believed the Delta had at last found the panacea for the innumerable problems that plagued the region.

As the catfish industry expanded, it received numerable positive reviews. In 1988 a piece in the *New York Times*, “A Fish Tale: Mississippi to Moscow,” praised the exponential growth in production and job creation that ensued: “This is good news in Mississippi’s Delta region, the leading catfish farming and processing area in the nation, where the young industry has been providing about the only manufacturing jobs to replace the increasingly mechanized, and sagging, agricultural sector.” After lauding the industry’s success, the article shifted its focus to the upcoming Reagan-Gorbachev summit in Moscow, where executive chef, John Folse, planned to serve Delta catfish as part of his quest to take Cajun cuisine to the world, a mission he took seriously. Delta Pride Catfish Company in Indianola, Mississippi provided the fish, and Folse provided the talent. Before traveling to Moscow, where he received international attention, Folse had prepared Cajun dinners in Japan, Hong Kong, Beijing, and Paris. The year after the Moscow summit, he flew to Rome to whip up a state dinner for the Vatican, and continued to promote catfish with appearances at restaurants in Europe, Columbia, and Korea. During the 1980s, the

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catfish industry, centered in the Mississippi Delta, grew into a highly organized and sophisticated business that generated billions of dollars for the state, employed a world renowned chef to promote its products, spawned a number of trade magazines and at least two trade associations, and benefitted from an agri-research program focused exclusively on improving catfish production. From Mississippi to Moscow and back again, aquaculture was serious business and it had arrived in the Delta.15

Against the Grain: Local Activists and Global Conservatives

A year after John Folse dished up Delta catfish in Moscow, the industry once again received national press coverage, but this time the articles assumed a very different tone. In September 1990, over 900 workers walked off the job at two Delta Pride catfish-processing facilities in Indianola, Mississippi, initiating a strike that lasted over three months. The predominantly black female workforce had grown increasingly agitated over stringent working conditions, repetitive motion injuries, low pay, and little time off. Other complaints included the limited number of bathroom breaks, the disrespectful attitude of management, racial bias and favoritism, and sexual harassment. The United Food and Commercial Workers union represented the employees in their dispute with Delta Pride, the largest catfish processor in the nation, a cooperative owned by 160 white farmers. The time and place, the socio-economic forces at play, and the history of the Mississippi Delta combined to provide fertile ground for a public debate on race and gender, labor and civil rights, moral responsibility and economic viability.16

16 A number of newspapers and wire services around the nation covered the strike. This account was drawn from The New York Times article by Peter Kilborn, “Charges of Exploitation Roil a Catfish Plant,” December 10, 1990.
Union officials, labor reporters, politicians, and the strikers themselves, recognized the power of their story: hundreds of poor black women, many of them single mothers, pitted against wealthy white farmers in Indianola, Mississippi. Place and historical memory mattered in this struggle. Newspaper reporters, union officials, strikers and their supporters used language to portray the disagreement as a racial conflict: “Struggle at Catfish Plant Pits Poor Blacks Against Prosperous Whites.”

Published quotes from strikers and union organizers asserted that the plantation mentality was alive and well in the Delta, “they’ve switched them from the cotton fields to the catfish plant, and they still regard them as field hands.” Strikers compared the catfish plant to the “cotton patch” and described work in the facilities as nothing less than modern day enslavement. The women also invoked their gender when they argued for unlimited restroom privileges and greater job flexibility to fulfill their responsibility as mothers and care for family members. Sarah White, strike leader and union organizer, declared, “We’re women and we’re trying to stand up for our rights. We’re black, we’re proud, and we’re crying out so somebody will hear us.”

The strike garnered national attention. On October 11, the Congressional Black Caucus held a hearing on Capitol Hill to investigate working conditions and labor relations in the Mississippi catfish plants. Union representatives and striking workers aired their grievances at a meeting where their own congressional representative was conspicuously absent. Black Democrat, Mike Espy, who represented Mississippi’s 2nd Congressional District, refused to

Additional sources include Delta newspaper, The Bolivar Commercial, dailies from September 1990 through December 1990; Labor reporter, Philip Dine, of the St. Louis Post-Dispatch (Missouri), provided the most comprehensive coverage of the strike in articles dating from September 1990 to December 1990.

19 Kilborn, “Charges of Exploitation Roil a Catfish Plant.”
attend the hearing maintaining that the dispute was not a civil rights issue but an economic problem and charged the meeting had not been “set up so that both sides could be heard and actual progress could be made…both sides make good points.”

In response, Representative Bill Clay from Missouri referred to Espy as a “gigolo” and declared “I think it’s about time that that black Congressman from Mississippi stand up for the people he represents.”

He argued the strike embodied much more than a simple labor dispute. For Clay, the situation was clearly a civil rights problem because “90% of the workers are black, and they are being exploited.”

Civil rights organizations followed suit, declaring their support for the catfish workers. Delta civil rights veteran and NAACP official Aaron Henry, along with Jesse Jackson, the National Rainbow Coalition, and Operation PUSH formed a civil rights coalition that backed the workers and promoted a national boycott of Delta Pride products. Henry asserted the situation resulted from “a combination of race and economics, coupled with the philosophy of the plantation,” and Jackson encouraged workers to fight against “those who have turned a plant into a plantation.”

According to labor reporter Philip Dine, of all the tactics employed by union officials and strikers, the boycott was the most effective. The pressure from organized labor, civil rights advocates, the national press, and the strikers themselves resulted in a national boycott that involved over 30 supermarket chains. Across the nation, retailers replaced Delta Pride products with those from their competitors. As far away as Boston, city council members requested that municipal food services stop doing business with the Delta Pride.

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22 Ibid.
In the Delta, the situation grew worse. In a region with high unemployment, Delta Pride had no problem replacing the striking workers, which in turn gave the processors a great deal of leverage, prolonged the strike, and heightened tensions between the two camps.²⁶ Violence and intimidation ensued. Philip Dine witnessed the chaos: “Almost immediately violence exploded… Both sides contributed, as bricks were hurled, windshields were broken, nails were thrown in the street, replacement workers tangled with pickets.”²⁷ The *St. Louis Dispatch* reported that police fired shots at some strikers and assaulted others.²⁸ Several arrests were made and the FBI investigated allegations of civil rights abuses.²⁹ In yet another strike related incident, a federal grand jury indicted a catfish farmer and his father on bribery charges for attempting to pay off a union official.³⁰ And finally, a federal mediator brought in to negotiate a settlement charged that neither side was interested in reaching an agreement.³¹

By mid-December, it seemed Delta Pride and union members had reached an impasse with no solution in sight. Then, quite unexpectedly, the two sides reached an agreement. Workers garnered a 20 percent pay increase, with even higher wages for skilled workers, liberal bathroom privileges, and more days off. In the three-year contract, Delta Pride agreed to rehire striking workers and address working conditions that led to repetitive motion injuries. Union officials, labor advocates, and Delta catfish workers gathered at a black church to celebrated what all considered a major victory. A minister addressed the exuberant crowd: “We had hoped for respect and dignity, and we got it—all over the nation. Now we got some money, we got to sell

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²⁶ Kilborn, “Charges of Exploitation Roil a Catfish Plant.”
²⁸ Jeffrey N. Sandman, “News Media ignore Labor Issues Press Coverage of Strike at Catfish Plant was a Notable Exception,” *St. Louis Dispatch*, December 5, 1990.
some catfish!”

Journalists, civil rights activists, and labor supporters praised the courage and tenacity of the Delta catfish workers. They dashed off accounts of the successful strike for publication and hailed the event as “one of the most significant labor and civil rights victories of the decade.”

Looking back, labor reporter Philip Dine summarized the experience:

In the Mississippi Delta, in an impoverished region seething with hostility to organized labor what little exists, in any case—I watched 900 women muster the courage to take on their employer, a cooperative of wealthy white men who exercised complete control over all aspects of the women’s work lives. Just years removed from the cotton fields and now working in the region’s new cash crop—catfish processing—these women waged the biggest strike by black workers in Mississippi’s torturous history.

For Dine and labor advocates, the strike exemplified what could be achieved even under the most oppressive conditions. And yet for all the significance attached to the event, and despite the news coverage the strike attracted, many Americans remained unaware of the episode. Years later, journalist Kristal Brent Zook demanded to know why she had never heard about the historic struggle in the Delta: “So, why haven’t I heard about it? Why hadn’t I known that black women of the 1990s were leading movements as grand as anything the 1960s ever saw? Why was there so little media coverage of ongoing civil rights struggles in the South?”

When one considers the economic and political climate in which the strike occurred, the more important question was how did the strikers manage to prevail with local, national, and political forces

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32 The strike and subsequent agreement that ended the dispute was followed by a number of major newspapers, wire services, and labor organizations. The accounts of the settlement in this study were drawn from several sources: “Catfish Plant Strikers Reach a Tentative Pact,” The New York Times, December 14, 1990; “Delta Pride, union reach tentative settlement,” The Bolivar Commercial, December 13, 1990; “Ex-Delta Pride strikers glad to be back at work,” The Bolivar Commercial, December 17, 1990; “Delta Pride president pleased with contract,” The Bolivar Commercial, December 18, 1990. Additional details of the settlement can be found in Dine, State of the Unions, 78.
34 Dine, State of the Unions, xxxi.
aligned against them?

The cards were stacked against the striking catfish workers on multiple levels. Beyond the embedded racism and patriarchal system inherent to the Delta, other factors challenged the strikers. In the summer of 1990 before Delta Pride workers walked off the job in September, the Aqua Group closed a catfish plant in Schlater, Mississippi, fewer than 30 miles from Indianola. One hundred employees lost their jobs in a region where the unemployment hovered around 9 percent.36 The closure of the Schlater plant was part of a larger contraction in an industry that had over-expanded in the decade leading up to the strike. In 1981, the year Delta Pride opened its first processing plant, there were only 5 other facilities in the region. Ten years later 37 plants, most of them located with a 100-mile radius of each other, processed fish from local ponds. The highly competitive market forced processors to keep production costs low in order to survive. Some did not. Three plants closed within months of the Delta Pride strike, and in the two years leading up to the walkout Delta Pride lost money. Subsequently, numerous processing plants were operating at a financial loss, and the farmers who owned the facilities had to cover the difference. In December of 1990, the president of Delta Pride told a New York Times reporter, “From the processing standpoint, the industry is sick. Processors are selling for less than their cost of production.”37 Processors reported millions of dollars in sales, but profits were marginal at best with several plants operating in the red. In sum, economic conditions in the Delta’s catfish industry during the late 1980s and early 1990s were hardly conducive to a successful drive for

36 Information on the plant closing was reported in “Schlater fish plant to close this summer,” Mississippi Business Journal, July 2, 1990. Unemployment statistics were reported in Kilborn, “Charges of Exploitation Roil a Catfish Plant.”
higher wages and better working conditions.

The political climate of the period presented another challenge for the strikers. The catfish workers were constituents of the 2nd Congressional District and participated in the historic 1986 election that sent democrat Mike Espy to the U.S. House of Representatives. When he took his seat in Congress, Espy became the first black Mississippian to represent the district since Reconstruction. 38 Up for reelection just weeks after the strike began, Espy assumed a moderate stance in dealing with the conflict between the union and Delta Pride. He declared his sympathy for the strikers but also acknowledged the need to create more jobs in the Delta. 39 His position infuriated local blacks, civil rights leaders, and several of his fellow members in the Congressional Black Caucus. 40 It seemed the catfish workers could not rely on the wholesale support of their black congressman, a man caught up in the conservative political forces that swept the nation in the late 1970s and 1980s.

By the late 1980s, Espy shared a moderate political position with many black leaders across the South. According to Bruce Schulman, Southern black politicians often joined their white counterparts in promoting economic growth over welfare and relief programs at a time when “conservative, pro-business, anti-government politics” swept the region. 41 Politicians, economists, and business leaders were intent on maintaining job growth after the 1983 spike in unemployment and growing concerns over deindustrialization across the nation. The jobless rate remained at or above 10% for most of that year, with record numbers of Americans out of work.

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40 Ibid.
for the longest period of time since before World War II. The spike in unemployment coincided with the publication of Barry Bluestone and Bennet Harrison’s disturbing study, *The Deindustrialization of America*, which documented the rapid decline in U.S. manufacturing jobs during the previous decade. Fiscal conditions improved over the next few years, but economic turmoil plagued the country during the 1970s. The recession that followed remained a powerful force in national memory and continued to shape public policy for years to come. Despite the historic election that gave the Indianola residents a black congressman, the strikers manning the picket line in 1990 had pitted themselves against a conservative economic and political climate that transcended race and emphasized economic development over civil and labor rights.

Not only were the strikers operating in an unfavorable political environment, they were also fighting for change in the South, a region that harbored a long history of anti-labor sentiment. Southern economic leaders and industrialists resisted any effort at unionization, which threatened to bring higher wages and weaken the competitive edge the region maintained over their Northern counterparts. The region’s fierce opposition to organized labor yielded results. In the years after World War II, wages in the Southern states were consistently 30 to 50% lower than those in the North. According to economics and labor historian, Timothy Minchin, “In 1987 … seven of the bottom ten states for hourly manufacturing wages were southeastern states…. Southeastern workers also consistently received the lowest levels of compensation for disability and unemployment and had the highest rates of occupational disease.” Minchin notes workers continued to lobby for improvements in the workplace against almost insurmountable odds.

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44 Timothy Minchin, *Fighting Against the Odds: A History of Southern Labor Since World War II*” (Gainesville:
the 1980s, the catfish workers in Indianola, Mississippi operated in a region where wages were 15 to 20% lower than the rest of the nation and where three decades of union activity had failed to bring about substantial change. In fact, labor union membership as a percent of nonagricultural workers in the former Confederate states fell from 14.75% in 1964 (which was half the national average) to 10% in 1985. During that same time period union membership fell 37% in Mississippi and the numbers continued to drop.\footnote{Alfred E. Eckes, “The South and Economic Globalization, 1950 to the Future,” in Globalization and the American South, James C. Cobb and William Stueck, eds. (Athens: University of Georgia Press, 2005), 36-65.} According to historian, Bruce Schulman, anti-unionism was only one factor in the transformation to a positive business climate in the South. Others included “right to work legislation,… low taxes, unrestricted growth, and pro-business governments.” Therefore, Schulman argued, conditions for labor remained unfavorable: “A 1986 study echoed these assessments: it rated the South near the top in business climate and rock bottom in ‘labor climate.’”\footnote{Schulman, From Cotton Belt to Sunbelt, 163.}

Laborers in the U.S. South and other regions of the country and Western Europe lost much of their bargaining power in the latter half of the twentieth century. By the 1970s, the controlled capitalism that led to prosperity after World War II no longer proved effective, and economists and political leaders searched for solutions to fiscal problems in the free market monetary policies associated with Milton Friedman and Frederick Hayek. When Margaret Thatcher assumed office in Great Britain in 1979 and Ronald Reagan rose to the presidency in 1980, they formed a partnership and aggressively promoted Friedman’s monetarist policies to liberalize economies at home and abroad. Thus, the 1980s ushered in a political and ideological
revolution, commonly referred to as neoliberalism that reverberated around the world. In practice, neoliberalism included privatizing industry and services, lowering taxes, downsizing government and reducing government spending, removing trade barriers, increasing capital flow, deregulating the economy, and controlling organized labor. A number of governments used these tools to revitalize their economies. After adopting neoliberal economic policies, the United States and Great Britain experienced a significant economic recovery and, under Milton Freidman’s guidance, economic prosperity returned to Chile. Advocates of *laissez-faire* monetary policies felt vindicated when the Berlin Wall fell in 1989 and the Soviet Union disintegrated. Neoliberalism traveled around the globe spreading to Canada, New Zealand, South Africa, Japan, Scandinavia, and China.

The Delta catfish strike took place in the midst of global economic and political transformations at home and abroad. At all levels—regional, national, and international—conservatives promoted free markets, less government, and deregulation. Ronald Reagan rose to power on a wave of conservatism that gained momentum during the 1970s and was particularly strong in the South. Organized labor suffered lethal blows when Reagan fired striking air traffic controllers in 1981. Four years later, Margaret Thatcher put down a coal miners’ insurrection in the very nation where the industrial revolution gave birth to labor solidarity. And finally, the Soviet Union’s state-controlled economy collapsed which, in turn, fueled the spread of neoliberal reforms. By 1990, market-oriented politics dominated domestic and international policy.

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decisions. In addition to an unfavorable political and economic climate, the catfish strikers walked off the job a month after Iraq invaded Kuwait, which captured local and national attention. The U.S. stood at the threshold of war and front pages of local papers focused on National Guard deployments and community ceremonies honoring military service, while “Support Our Troops” stickers appeared on vehicles in small towns across the Delta. Few Americans were interested in the fate of catfish skinners in Mississippi.

Therefore, when Kristal Brent Zook asked why she had not heard about the historic protest in the Mississippi Delta, the answer seemed clear. With the economic turmoil of the 70s and the rise of conservatism in the 80s, labor issues no longer captured the attention of the American public as they sometimes had in the past. In an article for the Pittsburg Gazette, “Alive and well and ignored by the media,” Jeffrey Sandman lamented the media’s disinterest in labor issues: “By any account, this is a major story… Yet the American people haven’t seen it on the nightly news. And, with few exceptions, they haven’t read about it in their newspapers.” So, at a time when the general climate provided little or no support for labor rights, how did a union, comprised primarily of poor black women in the Mississippi Delta, preempt local, regional, national, and global trends to win concessions against an industry facing a fiscal crisis in a pro-business, anti-labor, laissez-faire environment with a military crisis brewing in the Middle East?

The catfish workers succeeded because they capitalized on the social, economic, and political tools available to them at a specific place and time to mount a multifaceted attack on the local power structure. According to noted anthropologist, James C. Scott, “The local elite nearly always has its way in the local life of the village,” but Indianola was not an isolated village in Malaysia and the Indianola strikers brought a formidable collection of resources to the table:

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modern media and communication networks, union support, national communal bonds forged
during the civil rights movement, and the widespread negative perceptions of the Delta and
Mississippi.\textsuperscript{49} Strikers, union officials, and the media recognized the power of place, historical
memory, race, gender, regional identities, and stereotypes. They understood the strength the
story possessed through birthright, born in obscurity in the Mississippi Delta, and, ultimately, the
catfish workers prevailed.

Place matters. Sociologists and historians have used this simple sentence so often it risks
being relegated to the cliché-filled dustbin. Yet, the statement conveys a powerful and important
message. In fact, “place” gave the catfish workers a distinct advantage in their fight against the
processors. Indianola, Mississippi was the town where county officials denied civil rights activist
Fannie Lou Hamer the right to register to vote, the place where Robert “Tut” Patterson organized
the first White Citizens’ Council to oppose racial integration, the community where Theodore
Roosevelt closed the post office when local whites demanded the resignation of Minnie Cox, a
black woman who had served in the position for ten years.\textsuperscript{50} Anthropologist Hortense
Powdermaker and Yale sociologist John Dollard spent time in Indianola during the 1930s
collecting data for their classic studies of race and class in Sunflower County, works that shaped
public discourse on race in the United States for decades.\textsuperscript{51}

Indianola shared “the burden of history” with the broader geographical region, the Delta,
where Emmett Till was brutally murdered, where assassin Byron De La Beckwith returned home

\textsuperscript{49} James C. Scott, \textit{Weapons of the Weak: Everyday Forms of Peasant Resistance} (New Haven: Yale University
Press, 1985), 27.

\textsuperscript{50} For a description of the Minnie Cox incident see Chris Myers Asche, \textit{The Senator and the Sharecropper: The

\textsuperscript{51} Two classic ethnographies, Hortense Powdermaker's \textit{After Freedom: A Cultural Study in the Deep South} (New
York: Viking Press, 1939) and John Dollard's \textit{Caste and Class in a Southern Town} (New Haven: Yale University,
1937) contributed to a "master narrative" of the Mississippi Delta and the South that viewed class largely through
the lens of race.
to Greenwood to a “rousing parade” after a hung jury failed to convict him in the shooting death of Medgar Evers, and where civil rights activists spent Freedom Summer encouraging poor blacks to register to vote in a climate charged with racial violence. Indianola, Sunflower County, and the Delta remained inextricably associated with racial intimidation, poverty, and oppression. The region reverberated with Fannie Lou Hamer’s resounding question: “Is this America, land of the free and the home of the brave, where we have to sleep with our telephones off of the hooks because our lives be threatened daily because we want to live as decent human beings?”\textsuperscript{52} Like Ms. Hamer before them, the catfish workers asserted their basic right to live and work under just and fair conditions in the Mississippi Delta.

The strikers and their supporters combined their sense of place with other tactics to try to gain national attention and, in turn, bring more pressure to bear on the processors. They invoked their gender and race and referenced the oppressive labor system that continues to dominate the master narrative of the Delta. The workers emphasized gender differences, not similarities, in their struggle to gain concessions. They argued that as women, mothers, and caregivers they had special needs that employers should recognize, respect, and accommodate. Furthermore, gender intersected with race and provided the strikers with even greater influence. Perhaps no other element in the story had more impact than reports of poor black women pitted against white male elites in the Delta, a region one journalist described as “a remote place largely untouched by the civil rights movement of the 1950s and 1960s.”\textsuperscript{53} In a comment to the media, one union official reflected on the long history of racial oppression in the region: “…people here have been beaten

\textsuperscript{52} Asche, \textit{The Senator and the Sharecropper}, 4; Reference to Greenwood parade found in Charles M. Payne, \textit{I’ve Got the Light of Freedom: The Organizing Tradition and the Mississippi Freedom Struggle} (Berkeley: University of California Press, 1995) 289.
\textsuperscript{53} Dine, \textit{State of the Unions}, 59.
down by white men longer than any of these people have been alive.”\textsuperscript{54} The workers themselves made references to “slave wages,” in a region still dominated by a “plantation mentality” where they continued to be treated as “field hands.”\textsuperscript{55} Another protester declared, “If we don’t fight now, we’ll go back into slavery.”\textsuperscript{56}

Striking workers fused labor rights with civil rights and connected both to a religious struggle for freedom. For many, the fight for higher wages and better working conditions paralleled the drive for civil rights 30 years earlier. Reverend Joseph Lowery told labor supporters gathered at a rally that, “God may have chosen Indianola in the nineties, as he chose Birmingham and Selma in the sixties, to be the watershed that turns this country around.” Aaron Henry, a local civil rights legend and NAACP official, spoke to a gathering at the edge of a cotton field where the crowd sang “We Shall Overcome,” a protest song borrowed from gospel music.\textsuperscript{57} Ultimately, the striking workers, with the support of union organizers and labor activists, succeeded. They gained higher wages along with a number of other concessions and assurances that plant managers and owners would address workplace grievances in the future. Celebrations ensued. It seemed a modern-day David had slain Goliath in the Mississippi Delta.

Why was this strike important? What can be learned from revisiting the events that unfolded in the fall of 1990 in a remote southern community? The strike and subsequent outcome provided a case study that underscored the power of place, historical memory, and local agency in forming and reforming socioeconomic relationships. It demonstrated how local conditions and actors prevailed over global and national forces. At first glance, it seemed the

\textsuperscript{54} Fiquette, “Labor Stories Are Criticized.”
\textsuperscript{55} Dine, \textit{State of the Unions}, Chapter 2.
\textsuperscript{56} Dine, \textit{State of the Unions}, 70.
\textsuperscript{57} Ibid., 69.
striking workers were at a distinct disadvantage in the fiscally conservative, anti-labor, pro-
business environment of the time, but, as labor journalist Philip Dine noted, “If anyone was
overmatched, it was actually Delta Pride.”58 History and place intersected with race and gender
and produced the ideal environment for a successful protest. Place mattered. And the Delta, a
region with a particular economic, social, and historical structure, assumed an agentic role that
empowered African American women and helped ensure success in an economic, ideological,
and political climate stacked against them.

Given the unique circumstances in Indianola, would the strike have been successful if it
had occurred outside the Mississippi Delta? Probably not. Few stories captured public attention
like a conflict that pitted poor black women against elite white males in the post civil rights era.
Looking back on the event, Dine wrote: “Not every labor conflict, after all, unfolds in a place
with the richly textured history of the Mississippi Delta, contains the stark moral storylines of the
cotton pickers-turned-catfish processors, or fits into the larger mosaic of the civil rights
movement.”59 In other words, it seemed unlikely this local victory could be replicated in other
places with different agents and historical structures.

A year after catfish workers prevailed in the Mississippi Delta, poultry workers in
Morganton, North Carolina walked off the job. The overnight walkout marked the beginning of a
bitter ten-year battle for labor’s right to union organization and collective bargaining power.
Given the similarities between the labor struggles in the two states, the labor campaign in North
Carolina provided an excellent case study for comparison with the labor upheaval in Mississippi.
Both movements involved disadvantaged laborers working in meat processing plants under

58 Ibid., 86.
59 Ibid., 86.
comparable conditions; both protests lodged similar complaints including low pay, line speed ups, and access to restrooms; and in both cases, the workers drew substance from the community, the church, and a shared identity solidified through decades of poverty and social oppression. Furthermore, the strikes occurred in historically anti-union states in the midst of declining union membership and growing neoliberal, pro-business ideology.\textsuperscript{60}

Though remarkably similar, there were notable differences between the strikers in each state and the outcomes of each protest. The catfish workers were predominantly African American females, while the poultry workers were mainly Spanish-speaking males from Guatemala, modern day descendants of the Mayan civilization whose origins date back to 2000 BC. Part of a much larger Hispanic diaspora, the Maya fled a war-torn country seeking economic stability in a foreign nation. But despite significant differences, black women in the Mississippi Delta and Guatemalan refugees in North Carolina shared an innate sense of justice and personal dignity in the workplace. Both groups mounted impressive campaigns for labor rights and workplace concessions, but victory came a bit easier for the women in Mississippi. Over the years, the Maya participated in innumerable protests, walkouts, and work stoppages; they placed their trust in union officials, attended organizational meetings, and helped plot strategy; they formed a close-knit community that provided moral and financial support. But after ten long years, the Maya had little to show for their efforts and the untold dollars spent funding the struggle. Even though poultry workers at the Case Farms plant secured the right to organize, they gained few concessions from their employer: ”By summer 2001—despite the second court-ordered round of negotiations—the six-year standoff between Case Farms and its unionized workers had moved less to resolution than exhaustion—an irresolution that served the employer and its lawyers much

\textsuperscript{60} Fink, \textit{The Maya of Morganton}, 1-4.
better than the union." North Carolina was not the Mississippi Delta, and the Maya did not have the advantages race, gender, historical memory, and place bestowed on the women in Indianola.

In sum, between 1980 and 2000, transnational labor flows increased while global economic and political forces made it increasingly difficult for unskilled labor to attain power in a workplace. Labor historian Leon Fink reflected on the situation in North Carolina: “In the end the fate of immigrant poultry workers in the United State will likely be linked to the political dynamic in the host country and its elaboration in a world marketplace…” Fink was referring to foreign-born workers, but the same was true for black women in Mississippi along with unskilled laborers in a variety of situations across the US. and around the world. In other words, the “political dynamic,” which shaped the global economic dynamic through trade policy and international relations determined the fate of “global workers,” a classification that transcended national borders in a globalized world where local communities operated in a transnational marketplace.

During the months of negotiations, catfish workers and observers repeatedly referred to the omnipresent “plantation mentality” associated with the dominant white power structure and black oppression that permeated social relations for over a century in the Delta. But there were larger forces at play. Historian James Cobb noted in his study of the region: “In reality, …the Delta Pride strike had less to do with the persistence of the plantation mentality among Delta whites than with the sobering realities of employment in any slow-growth, low-wage, low-skill

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61 Ibid., 195.
62 Ibid., 182.
industry not only in the South but anywhere in the nation in the 1990s. In addition, he noted, “the fundamental disadvantage confronting workers at Delta Pride could actually be found throughout a manufacturing sector beset by slow growth, global competition, automation, and industrial migration to cheaper labor markets.” Eric Bates conferred: “…in Indianola, the catfish industry depends on a work force that is largely black, female, and poor. However, not only do the fish processing jobs pay little, they are also vulnerable to larger market forces. In 1990, a strike of 900 workers at the Delta Pride plant resulted in modest wage increases and better working conditions, but soon after, the whole industry began to institute cutbacks to counter the effects of a saturated market.”

The catfish workers understood racial prejudice, gender bias, and social and economic deprivation. During the standoff, strikers hurled accusations at the processors and plant owners. One observed that “the only thing that’s changed from the plantation is the crop… Instead of cotton, it’s catfish,” and another added that the plantation mentality “which assumes labor is disposable” was the predominant mindset at Delta Pride. Unfortunately, they were right on both counts.

Similar to cotton and other traditional crops, catfish farming followed an annual production cycle: stocking the ponds, tending the crop, harvesting at maturity, processing, and transporting to market. The crops and production methods changed throughout the century, especially after World War II, but labor relationships remained intact. According to Eric Bates, conditions in the catfish processing plants “illustrates the thread of continuity linking a slave

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64 Ibid., 331.
67 On diversification and labor see Fite, *Cotton Fields No More*. 

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past to a postindustrial present; where black women once chopped and picked cotton for white landowners, they now stand for hours and each rip and gut fish... Where they once suffered from back-breaking stoop labor, they now suffer from carpal tunnel syndrome, a crippling hand disease.\(^68\) One sad reality coexisted alongside another notable continuity in the Delta: a large percentage of the labor force remained unskilled and uneducated, which handicapped them in their bid gain real power in the shifting marketplace.

As for worker disposability, the processing plant never shut down operations during the strike, which occurred just as regional plant closings saturated the Delta labor market with unemployed workers.\(^69\) As unskilled laborers in a contracting industry, they \textit{were} disposable. Even highly trained workers were at risk in the 1980s political environment, as evidenced in the air traffic controller’s strike where Ronald Reagan fired workers for refusing to return to their jobs. In fact, unskilled labor was more disposable than ever, not only in the Mississippi Delta, but around the world. David Harvey, internationally renowned social theorist, maintains that “under neoliberalization, the figure of the ‘disposable worker’ emerges as prototypical on the world stage.”\(^70\) In recent decades, the increased flow of goods, services, information, technology, and people across open borders, combined with growth in off shoring and automation, continued to level the global playing field. In an increasingly “flat world,” women in catfish processing plants in the Mississippi Delta were dealing with many of the same challenges that women in maquiladoras in Mexico and young girls in Levi-Strauss factories in Singapore faced: a changing marketplace where untrained and uneducated workers were losing ground. That said, David Harvey asks: “So how, then, do disposable workers—women in particular—survive both socially

\(^{69}\) Cobb, \textit{The Most Southern Place On Earth}, 331.
\(^{70}\) Harvey, \textit{A Brief History of Neoliberalism}, 169.
and effectively in a world of flexible labour markets and short-term contracts, chronic job insecurities, lost social protections, and often debilitating labour, amongst the wreckage of collective institutions that once gave them a modicum of dignity and support?“71

Against all odds, disadvantaged black women in Mississippi drew from their local experience, from their gender and race, and from a shared history of black activism to mount a campaign for higher wages and improvements in their work environment. The protesters acted despite labor’s weakened position. Delta catfish workers won concessions and felt empowered in the process, but the most important issues remained unaddressed: the need for quality education and marketable skills in an increasingly global and highly competitive world. In many respects, the catfish workers won the battle but lost the war.

Labor journalist Philip Dine saw things differently: “The catfish workers’ campaign shows that labor can not only win in the most difficult workplace situations, but also its actions can have profound and lasting impact.”72 But when Kristen Brent Zook visited the Delta in 2005, she found little had changed. In the years after the labor dispute at Delta Pride, Zook traveled to the region numerous times to spend time with Sarah White, former catfish worker and strike leader turned union representative. During one visit, she found Sarah in poor health and deeply depressed, sharing her home with an unemployed daughter, three grandchildren, and an additional child she had cared for since infancy. Zook’s assessment of the lasting impact of the strike and the social and economic conditions in the Delta was not positive: “Whereas workers had won the right to time and a half pay after eight hours of work in 1990, they were now back to regular pay for up to nine or ten hours of labor, as long as the company stayed within the forty-

71 Ibid., 170.
72 Dine, State of the Unions, 87.
hour workweek. The union had lost ground.” Over the years, imported fish and automation transformed the industry and weakened labor’s influence. “With the threat of foreign markets at every corner (Vietnamese catfish was apparently making a dent the in Delta’s revenue), the company held the threat of bankruptcy over the negotiators’ heads, and it sometimes seemed like they meant it. Delta [Pride], which had three plants and nearly a thousand workers when the union first came, now had only one plant and, with increased mechanization, the workforce was down to 460 employees.”

In the mid to late 1990s catfish workers faced yet another challenge. Hispanic immigrants increased pressure on the local labor force to accept lower wages and fewer benefits. In 2006, *The Chicago Tribune* published a piece on the growing number of undocumented immigrants in the Mississippi Delta catfish industry. In the article, Sarah White said catfish workers were struggling “to hold on to what we have… We try to tell the Hispanic workers about the unions. But mostly they’re afraid and desperate and will do whatever to keep food on their table. Just like us.” She also noted the negative pressure these new laborers placed on union efforts to improve conditions and wages in the industry: “Now with Hispanic workers, it’s harder as far as concessions go. What more can you pinch off, when you don’t have but a pinch in the first place?” In short, porous borders increased transnational labor flows to the Delta where new immigrants threatened to undermine local workers and create new challenges for organized labor.

Global market forces continued to impact the catfish industry and laborers who worked in

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74 Dawn Turner Trice, “Immigration Issues Real in Delta: Struggle to hold on to what we have,” *A Katrina Reader*, http://www.cwsworkshop.org/katrinareader/node/51 (retrieved February 2, 2010). The article was originally published in *Chicago Tribune*.  

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the processing plants in the Mississippi Delta. In 2010, Dick Stevens, President of Consolidated Catfish Producers in Isola, Mississippi, maintained contraction and forced consolidation reduced the size and impact of the industry by over 50% in the region: “Catfish had a huge impact in the Delta in the 1980s with an 8 to 10 times turn on the dollar because it was totally contained here—feed production, processing, distribution, and ponds.” At its peak, more than 35 facilities employed 10,000 workers in processing alone. In 2010 only 6 plants operated in the region. Steven’s facility, Country Select, employed 850 workers and preferred to hire locally, though some of his competitors actively recruited Hispanic laborers. His plant was unionized and provided health benefits but that was not the case across the board. In fact, according to Stevens the same union that represented the catfish workers at Country Select had signed contracts with other plants that did not include health benefits. Visibly frustrated, he commented on the cutthroat competition in the industry: “Your competitor controls what you can do. We worked hard to unify this industry—but we can’t work together—you can only operate in the environment created by your competitors.” He was concerned about profitability, but also lamented a lack of integrity in the workplace and a decline in product quality: “If your competition seeks to lower costs and weaken labor influence by diluting its workforce with immigrant workers who will work for lower wages and fewer benefits, you stand at a distinct disadvantage if you do not follow his lead.” Plants in the region continued to modernize with equipment imported from Scandinavia and Iceland, not only to reduce labor costs, but also to remain competitive as imports claimed a greater share of the market. “Demand is driven off the lowest cost,” says Stevens, and unfortunately the industry may have embarked on a race to the

75 Dick Stevens (President, Consolidated Catfish Producer) interview with author, April 2, 2010, at Country Select Catfish processing plant, Isola, Mississippi, notes in author’s possession.
76 Stevens, interview with author. 2010.
Unlike its predecessor, cotton, the Delta catfish industry initially developed and matured apart from the global economic system, a home-grown industry that produced a product for regional consumption with exports garnering only a fraction of sales. But it could not remain detached from an increasingly globalized world. Cross-border labor flows, access to global technology, and transnational adoption of neoliberal economic policies breached regional boundaries and drew Delta catfish farmers, processors, and laborers into the international community. As local, global, and technological forces converged, they challenged and reshaped traditional identities and socioeconomic relationships in the contemporary Delta and raised several pivotal questions. First, how did local activists react to a transnational labor pool, no longer limited to the local and no longer bound by a common culture, identity, and history? Second, what possibilities existed for labor solidarity across ethnic, racial and gender lines in a local setting? Third, how did the accelerated pace of globalization impact the lives of local workers, farmers, and businessmen in the Delta? And finally, which institutions, familial ties, or community systems are responsible for educating Deltans for participation in the capitalist world system? In the labor conflict at Delta Pride, the local prevailed over the global. In other words, black women skinning and processing catfish in the Mississippi Delta won concessions in spite of a saturated labor market, growing pressure from immigrant workers, and conservative economic and labor policies that dominated the national and international political scene in most developed countries in the 1980s and 1990s, but the victory was short lived. The catfish processing industry in the Delta continued to contract as pressure from global competition in the fish market increased significantly during the decade after the strike at Delta Pride.

77 Ibid.
The Mississippi Delta vs. the Mekong Delta

Mississippi Delta farmers began to experiment with fish farming in the 1960s, but evidence suggests the practice originated in China nearly 4000 years ago and then spread to the rest of Asia, Europe, Africa, and the Americas. In the latter part of the twentieth century, technological advances in information sharing, communication, refrigeration, and delivery systems led to widespread implementation of intensive production systems. Just as aquaculture took hold in the Delta in the early 1970s and expanded rapidly over the next forty years, the same phenomenon occurred around the globe. The United Nations Food and Agriculture Organization compiled and published statistical data on global aquaculture activities dating back to 1950. According to historian James McWilliams, the FAO reports indicated a nine-fold increase in global aquaculture from 1970 to 2002. The notable expansion in the industry over a thirty-year period made “it the fastest growing method of producing food worldwide,” to which he adds, “This trend is good for us.”

Others agreed. A 1996 article titled “Catfish Farms Hold an Answer” drew attention to the growing demand for seafood along with estimates for world population growth in the coming decades and connected these trends to the future of aquaculture in the Delta. In the mid 1990s, Mississippi Delta catfish production dominated U.S. aquaculture in a nation which ranked fifth in overall fish production worldwide. Or, as one reporter described the situation, “Mississippi, a state at the bottom of many national socioeconomic rankings, could one day find itself at the

79 McWilliams, Just Food, 156.
80 Hanson, “Catfish Farming in Mississippi;” Larry Copeland, “Catfish Farms Hold an Answer,” The Philadelphia Inquirer, November 15, 1996.
forefront, as the nation—and the world—try to figure out how to feed a burgeoning population into the next century.”

At the end of the twentieth century the Delta stood poised for success in the global marketplace where indicators signaled a substantial increase in the need for a sustainable protein food source in the coming decades. McWilliams noted that in just a quarter of a century aquaculture had “grown into a major supplier of human protein. In 1970 aquaculture provided a mere .7 kilograms of fish per year per person; in 2002 that figure had jumped to 6.4 kilograms.” The future looked promising for the Delta catfish industry, but Mississippi producers failed to anticipate the competition they would face as trade barriers fell and the pace of globalization accelerated. Global political realignments, combined with technology, restructured the international market and brought two distinct places, the Mississippi Delta and the Mekong Delta, into conflict with one another.

While Delta row crop farmers busied themselves constructing catfish ponds in the mid 1970s, Saigon fell to the North Vietnamese bringing an end to decades of U.S. military engagement in Southeast Asia. Following in the footsteps of the Nixon administration, President Gerald Ford severed all diplomatic and trade relations with the Socialist Republic of Vietnam and, except for U.S. efforts to recover the remains of Vietnam veterans killed in action, the two countries rarely engaged one another during the next two decades. Vietnam’s Communist government maintained a tight grip on the country’s economy until years of crippling inflation and food shortages forced the regime to reconsider its position. In the 1980s, Vietnam’s government officials instituted limited economic reforms—collectively known as Doi Moi—and

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81 Ibid.
82 McWilliams, Just Food, 156.
moderate improvements ensued, but progress faltered when higher taxes were imposed. A few years later, the Soviet Union collapsed, and Vietnam lost a primary source of financial aid. The final blow came during the 1990s when the Asian fiscal crisis, combined with the economic upheaval of the previous two decades, prompted Vietnamese leaders to liberalize their economy and seek new trade and investment partners in the international community. Consequently, the Clinton administration lifted the trade embargo on Vietnam, and diplomatic talks ensued. The two countries signed a bilateral trade agreement normalizing trade relations in 2000, and the flow of goods between the U.S. and Vietnam doubled in a single year.\(^{84}\) In the words of one U.S. diplomat, “The trade agreement made a huge difference. Vietnam was absolutely convinced we’d overwhelm their markets with U.S. imports, that they’d be unable to compete. In fact, what’s happened has been exactly the reverse.”\(^{85}\)

Soon after the trade agreements went into effect, the Mississippi catfish industry felt the impact of these global realignments. The adoption of liberal economic and trade policies both at home and in Vietnam led to a significant increase in trade between the two countries which coincided with the global expansion of aquaculture. The new trade structure resulted in a decade long trade dispute between the Mississippi Delta catfish industry and Mekong River Delta fish farmers. Vietnamese imports of frozen catfish fillets quickly captured 20% of the domestic market that U.S. producers had dominated for over two decades. In just over a year, imports of Vietnamese fish fillets rose from 4 million in 1999 to 24 million, a six fold increase, and catfish

\(^{84}\) Ibid., 1.
prices fell 36%.\textsuperscript{86}

The dramatic change in market conditions led to an organized backlash from Mississippi producers while journalists chastised domestic farmers for refusing to settle for an 80% market share. The decline in sales disappointed Delta farmers, but their primary concerns centered on the possibility of an even greater loss of market share in the future. Those fears were well founded. In the 1990s, Mississippi catfish producers witnessed the Chinese invasion of the frozen crawfish tail market. Louisiana crawfish farmers had dominated the domestic marketplace until the Chinese started exporting frozen crawfish tails, and, in only three years, Asian imports took control of 75% of the U.S. market.\textsuperscript{87} Catfish farmers realized they would find themselves in the same position if Vietnamese fish imports continued to increase at the same rate over the next two years so they took action. In 2001, just as President Bush looked to expand his trade policy and “fast track” negotiations between the U.S. and nations around the globe, the Mississippi Delta fish farmers engaged growers from the Mekong River Delta in a battle over trade liberalization and food safety in the global marketplace.\textsuperscript{88}

Working through their trade organization, the Catfish Farmers of America, industry leaders launched an aggressive campaign to curb competition from Vietnamese imports. First, the catfish lobby claimed Vietnamese fish had no right to carry the “catfish” label. They argued the imports were not even catfish at all, but were instead “tra” fish, commonly translated to “basa” in English. In addition, the industry charged the Vietnamese were unfairly benefitting from the $70 million dollars the U.S. producers and processors spent on improving the quality


and public image of catfish and advertising their product in the domestic marketplace.\textsuperscript{89} American farmers also lobbied for a mandate requiring country of origin labeling so consumers could make an informed decision when purchasing fish at local retail outlets or ordering fillets in a restaurant.\textsuperscript{90} In a second round of attacks on Vietnamese imports, the catfish industry claimed Mekong River Delta farmers had been illegally “dumping” fish on the U.S. market well below the cost of production, triggering a Department of Commerce investigation into unfair trade practices. In the end, American catfish farmers prevailed in their trade war against Vietnamese producers. U.S. Government officials declared that only American farmers had the exclusive rights to the “catfish” label and the antidumping charges resulted in a 64% import tariff on Vietnamese fish imports. In a 2002 article for the \textit{Asian Wall Street Journal}, journalist Greg Rushford summed up the situation: “It is safe to say that in 2000 years of often turbulent history, Vietnam has never faced an enemy quite like the Catfish Farmers of America.”\textsuperscript{91}

American catfish farmers triumphed, but they set off a firestorm of criticism. Scientists and geneticists went back to their laboratories and journals in search of a definitive scientific definition of “catfish.” The press launched an attack on “elite, wealthy” Mississippi Delta farmers who dared to infringe on the noble efforts of poor Vietnamese villagers to earn a meager living. Many journalists couched the debate in Vietnam War rhetoric, invoking national collective memory of the disastrous conflict and American imperialism. Headlines in \textit{The New York Times} read, “Deep South is just a whisker away from war with Vietnam,” and “America and Vietnam are at war again.” Additional coverage in \textit{The New York Times} added that, “This

\textsuperscript{89} Reed, “Cat Fight.”

\textsuperscript{90} The debate was covered extensively in the media. Accounts of the initial charges brought by the catfish industry were drawn from the following sources: Reed, “Cat Fight”; “Harvesting Poverty; The Great Catfish War,” \textit{The New York Times}, July 22, 2003; and Rushford, “Catfishing for a Free Market.”

\textsuperscript{91} Rushford, “Catfishing for a Free Market.”
time, the Vietnamese have invaded the United States, with catfish, and a bitter war has broken out for access to America’s frying pans. The battlefield is the free market.”

Both sides in the conflict referenced the Vietnam War, and Representative Marion Berry from Arkansas, a major catfish producing state, joined the fight when he charged that Vietnamese fish were contaminated with Agent Orange, the chemical herbicide the U.S. military used during the war.

Others were more reflective in their observations. A representative of the Vietnam Association of Seafood Exporters said in an interview, "Our nation has a heavy history, and we try to forget it, try something new based on a spirit of cooperation and free trade, but now we are made to wonder whether you wish us ill, as much in the present as in the past." Surprisingly, the Vietnamese had a most unlikely advocate in former prisoner of war Senator John McCain, who had worked diligently to normalize relations with Vietnam and steer the country away from Communist economic and political policies. He described the attack on Asian fish imports as “a troubling example of the very protectionism we have urged the Vietnamese to abandon.”

Meanwhile, the Vietnamese embassy posted its position on its website attacking the U.S. catfish industry: “More than 20 years ago after their failure during the Vietnam war, they opt to launch a new war, as they declare, not to fight communism, but to combat Vietnamese tra and basa catfish.”

The trade war dragged on for years, and in 2009 U.S. catfish farmers once again drew national press coverage when they changed tactics. In yet another effort to curb imports, they

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93 Mydans, “Americans and Vietnamese Fighting Over Catfish.”


95 Mydans, “Americans and Vietnamese Fighting Over Catfish.”

launched a legal campaign to expand the definition of “catfish” to include Vietnamese *pangasius* imports making them subject to stringent USDA inspections. In other words, American catfish farmers who once lobbied for exclusive use of the “catfish” classification now insisted the label be applied to Vietnamese fish, which under USDA guidelines would require country of origin inspection before exportation. The catfish lobby was aware the Vietnamese could not implement an inspection system in a timely manner and this would result in a significant decrease in fish exports to the U.S. At this point, Congressman Barney Frank, a Democrat representing Massachusetts, joined the fight. Several processing plants that handled Vietnamese fish were located in his home district, and a ban would negatively impact the local industry.\(^97\) In a letter to the Secretary of Agriculture Tom Vilsack, Frank argued against expanding the definition of catfish: “This is not merely a scientific dispute... I believe it would be a serious mistake to impose this kind of negative economic burden, with the likelihood of significant job losses for U.S. companies.” He asserted the move “has the potential to cause economic harm among Massachusetts companies that process imported seafood.”\(^98\)

At first glance the trade disagreement appeared to be a dispute between two nations limited to a single industry over a bottom feeding fish, but the “catfish war” had broader implications. On the domestic front, the economic success of aquaculture in the Mississippi Delta conflicted with that of seafood processors in Massachusetts. With regard to foreign affairs, the actions of American catfish farmers posed a serious problem for diplomats and politicians who had worked for years to improve relations with Vietnam, not only to open markets but also


to increase U.S. military leverage in Southeast Asia. In 2003, the *Asia Times* reported on an invitation U.S. Secretary of Defense, Donald Rumsfeld, extended to Vietnamese officials to visit the U.S. According to the article, the overture was “the latest step in a lengthy courtship that Washington hopes will draw Vietnam into US strategic designs in the region, focused principally on keeping China contained and preventing the South China Sea from becoming a ‘Chinese Lake.’” The same piece mentioned tensions between the two countries over human rights and trade issues, particularly the quarrel over Vietnamese fish exports to the U.S. Though insignificant to most Americans, the “catfish war” was front-page news in Vietnam where, according to *The New York Times*, the dispute “stirred a great deal of anti-American resentments in Vietnam…resurrecting images of an imperial bully.” Simply put, American catfish producers and processors, a group composed primarily of Mississippi Delta farmers, formed a formidable stumbling block for improved U.S.-Vietnam relations and trade liberalization.

Nations around the world had a vested interest in the outcome of the catfish trade dispute pitting Delta producers against Vietnamese farmers. As developed and developing nations increasingly moved toward global integration, challenges arose in reconciling the disparities between the systems. In 2003, dual economic summits were held, one with diplomats from eight of the world’s wealthiest nations in France and the other with representatives from 39 of the world’s poorest nations in Bangladesh. Both groups met to address global economic and trade issues. Like the Vietnamese, political leaders in other developing countries were concerned about gaining access to global marketplace where economically advanced countries dominated world trade negotiations. They watched anxiously to see how Vietnam fared in the dispute with U.S.

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catfish farmers knowing that the outcome could have a bearing on future trade conflicts between advanced nations and the poorer members of the World Trade Organization. A *New York Times* editorial noted “the fate of Vietnam’s catfish offers a warning to poorer nations short on leverage in the world trading system: beware of what may happen if you actually succeed at playing by the big boys’ rules.”

A number of countries were interested in the implications the conflict held for global trade restrictions, and several industries followed the deliberations closely to determine how the outcome might impact their businesses. Years earlier, the European Union lost a labeling dispute with Peru over sardines while the Maine lobster industry argued that crustaceans imported from Chile were not “langostino lobster” and could not be offered as such in restaurants. Like the E.U., the U.S. lobster industry failed to make their case and the FDA included the Chilean species in their definition of “langostino lobsters.” If the catfish farmers prevailed, earlier cases might be revisited and future cases could be argued based on the precedent set in the dispute. Simply put, labeling was a serious issue that often determined the fate of businesses and workers not only in the U.S. but also around the globe. But the issues raised in the debate were not limited to labeling in the fish and seafood industries. Many feared the catfish controversy would set off a trade war with the Vietnamese. The Mississippi catfish farmers’ campaign to restrict Vietnamese fish imports concerned U.S. beef producers who feared a ruling in favor of the U.S. catfish industry would lead to retaliatory trade restrictions on U.S. beef imports to Vietnam, the fifth largest market for American beef. The Vietnamese were major importers of

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U.S. soy products, as well. In short, as the American catfish industry acted to protect their market, they also posed critical questions concerning international trade in an increasingly complex and interconnected global economy, and the outcome had implications far beyond the catfish industry and the Mississippi Delta.

The catfish wars underscored the difficult task of setting and enforcing global food safety and environmental regulations in the rapidly expanding global aquaculture industry. According to U.N. statistics, in 2008 global consumption of farm-raised fish surpassed that of wild fish. A report in Food Engineering Magazine reiterated the U.N. findings: “The day when all fish for human consumption makes its way to a plate through a fish farm may arrive sooner rather than later. The United Nation’s Food and Agriculture Organization estimates 43% of world fishery production now comes from aquaculture, the fastest growing animal food-production sector.”

With increased consumption, food safety and traceability issues moved to the forefront in global fish trade. Mississippi catfish farmers used the food safety platform to support their campaign for USDA inspection oversight and country of origin labeling with claims of tainted fish imports raised in countries with polluted water systems and few regulations. A catfish lobby ad claimed Asian fish had “grown up flapping around in third-world rivers and dining on whatever they can get their fins on,” while the Catfish Farmers of America issued press releases to inform the public of the dangers of consuming Asian catfish and spent millions of dollars lobbying U.S. congressmen for tighter regulations on imports. The Delta Farm Press published an editorial connecting Asian imports to environmental degradation and consumer health:

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On the other side of the world, crimes against humanity and the environment are taking place. Rivers and streams are carpeted with the most unimaginable detritus from manufacturing plants—so much so one can hardly tell there is water underneath. Powerful chemicals from manufacturing processes are dumped into the water. Dead fish are everywhere. Chemical residues contaminate soils. Acrid smoke, containing more chemicals, billows into the air and produces a black smog that blots out the sun. Birth defects and deaths from cancers and other diseases in contaminated areas are so numerous as to defy statistical norms.¹⁰⁷

The message from the American catfish industry was clear; Asian fish farmed under suspect conditions were unsafe for human consumption.

The “catfish war” between the Mekong Delta and the Mississippi Delta raged on. In April, 2010, the Catfish Farmers of America sent a video crew to shoot footage of fish farming practices in Vietnam. The final product, “Dirty Waters, Dangerous Fish,” was posted on YouTube to inform consumers about the conditions in the Mekong River Delta. The video footage focused on slums and factories along the river where catfish were raised for export to the United States, the European Union, and Japan. According to the video, the situation was so dire that “even Vietnamese government health and aquaculture officials have warned farmers that their water quality does not meet international standards.” The narrator claimed that exports to the U.S. increased 14 fold over a six-year period and more than 98% of the fish that entered the country went uninspected, “of the tiny fraction that was tested, much of the fish contained potentially dangerous carcinogens, veterinary drugs and salmonella, the result of unsafe farming practices and pollutants in one of the world’s dirtiest rivers.”¹⁰⁸

U.S. catfish farmers were not alone in their concerns. Fish farming and harvesting


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practices around the globe alarmed environmentalists, consumer groups, and the United Nations Food and Agriculture Organization. In fact, reports in the *New York Times* and information from the U.N.’s Food and Agriculture Organization supported many of the America catfish producers’ claims of unsafe production practices. The primary problem with Vietnamese fish farming was the contaminated water source in which the fish were raised. The Mekong River served as a sanitation system for the region collecting waste from humans, chemical and fertilizer run off from farming operations, and industrial byproducts from factories. Food safety, fair trade, and product labeling remained major concerns, but Vietnam proved to be a small problem compared to the challenges Delta catfish farmers faced in the years ahead.

**Mississippi Delta Aquaculture in a Transnational World**

After almost a decade of fighting to curb fish imports from the Mekong Delta, Mississippi producers shifted their concerns to a much larger problem: China. In 2010, from his desk inside the Country Select Catfish processing plant in Isola, Mississippi, Dick Stevens reflected on the changes taking place in global fish production: “Today the problem is not Vietnam, it’s China. That’s the competitor that can take over this industry.”\(^ {109} \) Just a few years earlier, China launched production operations using American catfish fingerlings and moved the fish to market at a much cheaper price than U.S. producers.\(^ {110} \) In 2007, the country produced around 70 percent of the world’s commercially farmed fish. Richard Stavis, chairman of an American company that imported catfish from China, predicted the nation would dominate the

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\(^ {109} \) Stevens, interview with author, 2010.

industry in the future: “They’ll be a major supplier not just to the U.S., but to the world.”

The same environmental and health concerns over Vietnamese aquaculture applied to Chinese fish production. In 2007, the *New York Times* reported on fish farming in China, the rising giant in the global fish trade, noting that within the past two decades the country had become the “biggest producer and exporter of seafood to the world, and the fastest growing supplier to the United States,” but industry expansion was “threatened by the two most glaring environmental weaknesses in China: acute water shortages and water supplies contaminated by sewage, industrial waste and agricultural runoff that includes pesticides.” The same article quoted a Chinese fish farmer who declared: “Our waters here are filthy.” Two years later history professor James McWilliams published his research on sustainable agriculture for the future in which he argued that aquaculture was the answer for a clean, sustainable source of protein to feed the globe in the decades ahead, but irresponsible fish farming practices were unacceptable: “A virtual lack of environmental laws in many Asian nations has enabled big industry to pollute the air, soil, and water to such an extent that developed countries have become rightfully wary of coming within smelling distance of edible products from, say, China. Aquaculture has been a victim of this broader degradation.” That said, McWilliams maintained consumers had a responsibility to determine the origins of the fish they consume for their own personal health as well as that of the environment.

The catfish wars produced several unlikely global alliances. In 2010 the United Nations Food and Agriculture Organization joined with agribusiness representatives in advocating for

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113 Ye Choa quoted in Barboza, “Farming Fish in Toxic Waters.”
114 McWilliams, *Just Food*, 165.
115 Ibid., 173.
international labeling guidelines and tighter regulation of the global fish trade. The FAO Media Centre posted a report on deaths in Rome and Japan after customers ate mislabeled seafood and conceded identifying processed fish had become increasingly difficult: “Fraudulent product substitution and use of false labels and documentation are frequently employed to transport and market products illicitly.” According to the report, the international fish trade had reached $86 billion annually. The unprecedented global demand generated novel challenges in regulating the commodity as global consumers called for an increased supply of fish products that were both safe to consume and had been “caught or farmed responsibly.” The same report connected labeling to traceability and the role both played in liability. This led to another critical question: who would be held responsible for fish-related deaths or illnesses in the transnational legal arena? In other words, if American consumers ate tainted “catfish” from anywhere in the world, Delta farmers would feel the backlash regardless of where the fish came from—even if point of origination could be determined. Simply put, Mississippi Delta fish farmers and U.N. officials expressed serious concerns over a lack of labeling—or intentional mislabeling—and the potential for legal, economic, and health problems that would impact producers and consumers around the world.\footnote{Food and Agriculture Organization, “The case of the mysterious seafood,” February 1, 2010, Media Centre, \url{http://www.fao.org/news/story/en/item/38975/icode/} (retrieved February 17, 2010).}

Environmentalists weighed in on the side of American catfish farmers. Unregulated ocean harvesting and fish farming led to a rapid decline in wild commercial fish species and a dramatic increase in waste byproducts and compromised ecosystems in countries with few environmental laws and little government oversight. As global consumer demand for fish increased, somber predictions surfaced. In 2004 the FOA warned that “75% of commercial fish
stocks were ‘overused, collapsed, or in a state of repair.’” Experts at the National Geographic Society as well as the Marine Advisory Fishery Commission supported this conclusion. In other words, clean, sustainable protein production had become a major global environmental issue that, in turn, shed a positive light on catfish farming in the U.S. South. According to James McWilliams, catfish farms in the American South were large but “their impact on the environment remains moderate.” In addition, “Catfish need minimal added fish meal for their feed, require few drugs, are native to the southeastern United States, and, owing in part to strict state water pollution standards, swim in relatively clean earthen ponds.” Two environmental watchdog groups, the Monterey Bay Aquarium and the Blue Ocean Institute, endorsed U.S. catfish as “socially responsible” choices as clean, safe and sustainable sources of protein. In sum, as the debate over global aquaculture grew, Delta catfish farmers found themselves in an unlikely alliance with environmentalists, consumer watchdog groups, and the United Nations Food and Agriculture Organization in the campaign for country of origin labeling, increased inspections, and strict regulation of fish farming operations around the globe.\(^{118}\)

Despite early political victories and support from various national and international organizations, the Delta catfish industry continued to suffer. In the end, the most devastating blow to Mississippi Delta producers did not come from cheap Vietnamese and Chinese imports, but from oil. In 2007 crude oil prices began to rise at an alarming rate peaking in 2008 at close to $150.00 a barrel, fueling a national recession and marking major shifts in U.S. agricultural production. Corn and soybean stocks—primary sources of feed for livestock and catfish—were diverted to ethanol and biodiesel production to offset the rise in domestic fuel costs. Generous

\(^{117}\) McWilliams, Just Food, 157.
\(^{118}\) Ibid., chapter 5.
federal subsidies for ethanol refiners contributed to a sharp in grain prices, which benefitted commodity farmers in the Delta and across the nation. But while soybean and corn farmers benefitted from the oil crisis, catfish farmers suffered as rising feed and transportation costs forced many to abandon production. In the Mississippi Delta, catfish processing plants laid off workers, feed mills shut down, restaurants closed their doors, and farmers drained their ponds and converted back to grain production.

Over a 50-year period, millions of dollars in private and public funds were spent on land modifications, processing plant construction, lobbying efforts, scientific research, and public relations and advertising campaigns to build and promote the catfish industry in the Mississippi Delta. But a complex set of local, national, and international transformations, exchanges, and encounters presented challenges the industry could not overcome. Pond acreage declined steadily after the 2008 fuel crisis. Catfish producer John Dillard commented on the changes: “It’s a dead business,” followed by the suggestion that Americans could consume imported fish along much the same as they used imported oil. Production in Mississippi peaked in 2001 with 133,000 acres in fish production but fell to 70,000 acres in 2009. The June 2010 issue of the Delta Business Journal reported 15,000 acres of catfish ponds had been retired during that year alone and the number was expected to increase in the near future as catfish ponds continued to lose their value. Foreign competition continued to eat away at domestic market share, feed prices

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121 Kindy, “Food safety rules to emerge from fight over imported fish.”
122 Dillard quoted Streitfeld, “As the Price of Grain Rises, Catfish Farms Dry Up.”
remained high, and farmers attended workshops where they discussed new uses for abandoned ponds.\textsuperscript{124} When local and state leaders met in 2010 to discuss the numerous challenges facing the Delta, State Senator Willie Simmons conceded the catfish industry, along with cotton and corn production and casino revenues, may never “rise to previous levels.” He suggested the region would have to look elsewhere for job creation and economic revitalization in the future.\textsuperscript{125} That same year the \textit{New York Times} reported “Fish is now the most traded animal commodity on the planet, with about 100 million tons of wild and farmed fish sold each year.”\textsuperscript{126} Three years later, at the 2013 annual meeting of the Catfish Farmers of America, the mood was somber. In 2003 U.S. catfish farmers controlled 80 percent of the domestic market; a decade later they controlled only a 20 percent share with the rest going to imports. The global had eclipsed the local, marking the decline and perhaps final chapter of what one demoralized booster referred to as “a great American story.”\textsuperscript{127}

**Comparing Catfish to Catfish**

In short, Mississippi Delta catfish farmers found themselves engaged in ongoing international debates concerning fair trade practices, food labeling requirements, guidelines for environmentally sustainable fish production, agricultural subsidies at home and abroad, fair labor practices, and consumer protection laws. Delta farmers and processors—seeking economic protection—posed questions related to the exchanges between the global economy and local

\textsuperscript{125} Senator Willie Simmons at “Delta Summit” in 2010.
communities in countries around the world. What does globalization look like at the local level? How does this process impact the lives of average Americans? How do countries reconcile fair trade with free trade across borders with great disparities in labor practices, chemical use, and environmental standards? Should scientific research to improve fish farming that originates in the Mississippi Delta using U.S. tax dollars be shared with the rest of the world? What impact does immigration, both legal and illegal, and federal immigration laws have on local workers in Mississippi? Can fair trade take place when the U.S. and other countries provide subsidies to their catfish farmers? The extreme differences in production, regulation, and labor conditions across national borders made it nearly impossible to determine a “fair market” price for commercially farmed fish entering the global market, to compare “catfish to catfish.” The industry continued to contract. In 1997 the U.S. imported 942,000 pounds of frozen fish fillets, by 2010 the number had climbed to 137 million pounds of fish. There were 94,000 acres in catfish ponds in production in Mississippi in 1991. The number peaked in 2002 at 112,700 and in less than a decade fell to 55,500 water surface acres in 2011. In 2013, the future of the Delta catfish industry remained uncertain. Catfish ponds may share the same fate as the dairy barns and chicken houses that disappeared from the region decades earlier. “We have been around the world here,” said James Lindsey, lifelong resident of the region, “But it basically comes back around to cotton, soybeans, rice, corn, and wheat.” Delta farmers constantly adjusted to changes in national and international markets to maximize profits as foreign competition

129 For statistics on changes in U.S. fish imports from 1987-2010 see Terry Hanson and Dave Sites, “2010 U.S. Catfish Database,” Fisheries and Allied Aquacultures Departmental Series, no. 4, May 2011, Alabama Agricultural Experiment Station, Auburn University, Auburn Alabama, 80.
131 Lindsey, in discussion with the author, 2010.
increased in the second half of the twentieth century. While agriculture remained the primary industry in the region, some Deltans turned to other business ventures. The next chapter examines the tradition of global entrepreneurialism in the region.
CHAPTER VI
TRANSNATIONAL ENTREPRENEURS

“I didn't want to be a little fish in a big pond. I wanted to be a big fish in a little pond.”

Joe Janoush, Delta entrepreneur,
on returning to the region to establish a business, 2015

“People in the Delta have a certain swagger and sense of individualism…. There is a kind of outgoing pride.”

Richard Grant, British travel writer, 2016

On September 22, 1995, twenty-two Americans from the 962nd Airborne Air Control Squadron and two Canadians boarded a converted Boeing 707 airliner for a routine training mission at Elmendorf Air Force Base outside Anchorage, Alaska. The aircraft carried an advanced radar and command system, Airborne Warning and Control System (AWACS), one of the most sophisticated surveillance planes at the time. Loaded with 126,000 pounds of fuel, the plane taxed down the runway, received clearance for takeoff, and the pilots pushed the throttles forward. At lift-off, an engine caught fire resulting in catastrophic failure in one engine and partial loss in another. As the plane lost power the pilots banked left and the crew immediately began dumping fuel. A minute later the aircraft crashed and burned in a forest less than one mile

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1 Joe Janoush (Delta entrepreneur) in conversation with the author, June 2015.
2 Richard Grant, author of Dispatches from Pluto, interview by Jana Hoops, “Embracing Mississippi,” Clarion Ledger, December 25, 2016, 2F.
from the runway, killing everyone on board.\(^3\) Investigators determined the probable cause of the disaster was an “ingestion of Canada geese into the no. 1 and 2 engines,” due in large part, to the fact that the base “lacked an aggressive program to detect and deter geese.”\(^4\) Determined to avoid similar accidents in the future, Air Force officials searched for specialists in wildlife abatement systems and found them in an unlikely place—Greenville, Mississippi.

**Ordinary People in a Transnational World**

This chapter presents additional evidence of the modern, innovative nature of the Delta and the transnational flows of people, goods, culture, technology, information, and services through local entrepreneurs and businesses. Scholars have explored the literary and music traditions of the Delta, but region’s entrepreneurialism deserves closer attention. Before the rise of national franchises and commercial giants, all communities were highly entrepreneurial with locally owned and independently operated restraints, banks, gas stations, and retail stores. And agriculture has always been global in nature, therefore, farmers may be defined as global entrepreneurs, but the Delta produced a surprising number of businesses with a broad global reach in the second half of the twentieth century as Delta entrepreneurs interacted with and became integrated into the global market system. These entrepreneurs share a number of things in common. Except for blues musicians, white men dominate the group and they often had access expertise or capital through social or familial networks. Many had college degrees and military experience. All of these Delta entrepreneurs in this study operated a business with a

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global impact or presence.

**Business Opportunities in Aviation**

Barthell Joseph, Jr. moved to the Delta in 1953 to help Clarke Reed run a grain storage business. A native of Tennessee, Joseph graduated from Columbia Military Academy, served in the U.S. Army as a paratrooper with the 82nd Airborne Division during World War II, completed college and moved to Nashville to work in the insurance industry. Reed, his former roommate from military school, contacted Joseph asked him to consider relocating to Greenville, Mississippi, to help him operate a grain business. The U.S. was at war in Korea and Clarke, an officer in the Air Force Reserve, had been called for active duty. Joseph agreed and the two men formed a partnership. Over a period of six decades, they engaged in several business ventures including agriculture, land development, construction, marine transportation, and—since both men were pilots—an air charter service. As young rice farmers in the Delta, Joseph and Reed looked for a way to stop birds from feeding on their crops, which resulted in lower yields. After a long and comprehensive search, they located cannons manufactured in Europe just for this purpose. Joseph described the search process: “We wrote to every Western European Embassy asking about these devices because with only a limited number of acres, grain crops were highly valued in Europe. We finally found them in Belgium.” After testing them on their own fields, the partners began importing the products for resale locally and expanded to the national market. To generate sales leads and locate possible dealers, the men mailed packets of information along with a two cent postcard to every county agent in the U.S. asking the agents to return the card if

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residents of their counties had problems with wildlife damage to crops or property. By the mid 1970s, Clark and Joseph had an established business in wildlife abatement systems, with supplies stored in an explosive magazine at the former U.S. Air Force base outside town and a stream of referrals from the USDA redirecting inquiries to the company. “The USDA has turned out to be a great sales force for us,” commented Reed. With their background in aviation, the partners realized gas cannons used to frighten birds away from Delta rice fields might also be valuable safety devices for airfields. Aware that takeoffs and landings were the most critical times during flights, and engine failure due to a bird strike could prove disastrous, the men developed a bird dispersal system for airports and airfields and began attending aviation trade shows to increase exposure for their products. Improvement in delivery and communication systems through UPS and fax machines expedited transactions, and civilian airports began to install the company’s bird deterrent system. The AWACS plane crash in 1995 due to a flock of Canada geese led U.S. Air Force officials to Reed-Joseph International in the Delta for a solution to the problem. Installations at Air Force bases resulted in international exposure, and by 2007 Reed-Joseph had 135 distributors around the world. “Just about all sizeable airports buy something from this company,” remarked Joseph.

The company provided services to U.S. Air Force bases in the states and abroad, including the Andrews Air Force Base, which serves the President. Joseph’s son, Barthell Joseph, III, worked throughout Europe and Central Asia as the company continued to expand into new markets. “We haven’t even scratched the surface in the Pacific and Alaska yet.”

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7 Tom Bassing, “Reed-Joseph’s clients worldwide rely on its ability to make noise—lots of it,” Delta Democrat Times, August 12, 2013.
8 Taylor, “Barthell Joseph, Jr., For This Greenville Businessman.”
remarked Joseph.\textsuperscript{11} 

Years earlier, another war veteran and Delta transplant, Johnny Dorr, recognized a business opportunity at the intersection of agriculture and aviation. Aerial application of chemicals began in the late 1920s and 1930s, but became common practice in agriculture in the postwar years. Several factors contributed to rapid growth in the industry: the development of new chemicals, returning war veterans with a specific skill set in need of jobs, and a supply of training planes available at a cheap price and easily converted for crop-dusting. During World War II, Dorr served with the Army’s Eastern Air Training Command in Florida training American and British cadets to fly. When the war ended, he returned to his home state of Maryland, began crop dusting, and established an agricultural pilot training program, perhaps the first in the nation. Four years later, Dorr relocated to Merigold, Mississippi, where he and his wife, Dot, opened a flying school with instruction based on a curriculum and flight program specifically designed to train pilots for the field of agricultural aviation, an important step forward in professionalizing the industry.\textsuperscript{12} 

Students enrolled in the program at Dorr Field accumulated hours of actual flight training, but a great deal of instruction involved the handling and mixing of chemicals and aviation safety procedures.\textsuperscript{13} The school offered dormitory accommodations, meals, laundry services, and a lounge area for students.\textsuperscript{14} Dot Dorr helped operate all aspects of the business including a small diner, which became a popular lunch spot and place for afternoon socializing. Deltans often visited with students and watched Dorr perform aerobatics in his modified 

\textsuperscript{11} Barthell Joseph, III (Partner, Reed-Joseph International Company) interview by author, March 2007.  
\textsuperscript{13} Chevron News, “Pilots Chemical Safety Includes Study of Entomology,” July/August, 1968; \textit{The Bolivar Commercial}, “A Pilot’s ‘Classroom in the Sky.’”  
\textsuperscript{14} Backstrom, \textit{Johnny Door Aviator}, 94.
Stearman, where he impressed newcomers with his most memorable maneuver—flying his plane upside down a few feet off the ground.\textsuperscript{15}

In the late 1950s the school began to attract international students with the largest number arriving from Latin America. Circumstances that resulted in the first exchanges remain unclear, but during the Cold War the federal government supported and facilitated the flow of international students into the U.S. and the export of American style agriculture to developing countries. Governments sponsored many of the students as nations moved to large-scale commercial agriculture.\textsuperscript{16} In 1962, an article in The Bolivar Commercial claimed the flight school was “one of two in the nation,” with “an international student body” hailing from Canada, France, Spain, and Central America.\textsuperscript{17} In 1966, a feature article in the Commercial Appeal Mid-South Magazine expanded the list of countries of origin for participants in the program:

“…scores of foreign students… have come from South America, Canada, Australia, France, Spain, Sweden, Denmark, Germany, Greece, and Israel…”\textsuperscript{18} Johnny Outz, professor at Delta State University in nearby Cleveland, wrote “A Historical Sketch of Agricultural Aviation” in the 1970s, and he listed students from 14 countries including Guatemala, England, Denmark, Belgium, Norway, Australia, Costa Rica, France, Chile, Puerto Rico, Brazil, Venezuela, Spain, and South Africa.\textsuperscript{19} Transnational exchanges were not limited to students. In 1967 A.J. Christie, an Australian official with the Department of Civil Aviation in Melbourne, spent four weeks in the

\textsuperscript{15} Julio Vargas (pilot, former Merigold Flying School student from Guatemala) interview by author, October, 29, 2009; James Lindsey (retired Delta farmer) in discussion with the author, October 29, 2009; JV, Bill Redditt (pilot) interview by author, October 29, 2009; Renate Backstrom (pilot, former Merigold Flying School student from Germany) interview by author, October 29, 2009.


\textsuperscript{17} The Bolivar Commercial, “A Pilot’s ‘Classroom in the Sky,’” April 26, 1962. Larry Speakes, who later served as White House Press Secretary in the Reagan Administration took the photographs for the article.


U.S. visiting airfields and training programs. Christie and his host, Farrell Higbee, Executive Director of the National Aerial Applicators Association in Washington, D.C., visited Dorr Field, which was recognized as one of the few places that offered a training program for agricultural pilots.  

Most of the international students returned to their home countries, but a few remained in the states. Frank Lohr from Germany worked as an instructor at Door field, and Julio Vargas from Guatemala married a Deltan, Joanette Tedford. The couple divided their time between Mississippi and Central America, where Vargas flew in Guatemala during the off-season. Renate Backstrom earned her pilot’s license in Germany, traveled the U.S., and spent more than a year in New York working as an au pair and taking flying lessons at Armonk Airport. When she ran across an advertisement for Merigold Flying School, Backstrom submitted an application, was accepted to the program, and in April of 1966, boarded a Greyhound bus for Mississippi. She earned her commercial license later that year and moved to Texas but maintained a close friendship with the Dorrs returning to Merigold for visits on a regular basis. Johnny and Dot Dorr were injured in a car accident in the 1976 and he never fully recovered. Dot Dorr lived at the airfield until she passed away in 2012. For more than twenty years, the Dorrs and Merigold Flying School facilitated the transnational flow of students, strengthening ties between the region and communities around the world.

A New Breed of Merchants: Virtual Commodity Brokers

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The history of Varner Brokerage Company in the Delta can be traced back to the early twentieth century when the family raised cotton in the Delta, but the risks were great, and Rogers Varner, Sr. searched for another way to profit from the cotton industry. After graduating from college in 1949, Varner worked for the Swiss-based company, Reinhart, where he gained experience in the commodities market and opened an independent office in Shelby, Mississippi. A few years later, Varner moved the business to Cleveland, and his three sons—Rogers, Bryan, and Michael—grew up watching the cotton merchant grade samples, offer farmers a price for their crop, and then sell the stocks to a trader in Memphis or New Orleans.23

Changes in the industry eliminated the middlemen, particularly small town cotton merchants.24 In the 1980s, the three brothers recognized the structural changes taking place in the cotton trading business and moved to fill a specialty niche, futures trading and brokerage. The Varners transformed the 1920s building on Cotton Row that once overflowed with stacks of cotton samples rolled in brown paper into a high-tech communications center. Technological advances in global communications allowed the brothers to connect buyers and markets around the world, facilitating the sale of millions of dollars in commodities daily. According to Bryan Varner the global cotton trading community contracted and there were very few traders who specialized in trading one commodity, and no more than ten commodity brokers in the world who truly specialize in cotton.25 The Varner brothers belonged to that group.

The market place was constantly changing, and no one understood this better than Bryan and Rogers Varner. As part of a global commodity brokerage business, the two brothers operated

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from the nondescript office on Cotton Row along the old railroad bed in downtown Cleveland, Mississippi, while their younger brother, Michael, worked with the firm from his Memphis office. The brothers frequently traveled overseas to visit customers, most of whom were merchants purchasing cotton for future mill use and in need of protection from market fluctuations. Rogers explained the role the firm in these transactions: “If they didn’t have that cotton immediately sold to a mill in say Indonesia or China, they had a price risk, and the market could drop the next day. They, therefore, placed their orders with us to hedge their risk, and we placed their orders at the New York Cotton Exchange.” Travel was a necessary part of the business to negotiate transactions for futures and options. Since most of their transactions were conducted virtually, the brothers found that traveling to meet clients in person improved their business relationships.

The give and take between the firm and the international commodity community was multidimensional. In addition to the primary activities of a brokerage house, the company owned a seat on the New York Cotton Exchange, maintained an office in England, and provided monthly analyses of the cotton market to the Wall Street Journal. The brothers attended international cotton conferences where merchants gathered from China, India, Russia, U.S., Australia, and Europe. The Varners connected buyers, bankers, warehousers, and brokers from around the world. Negotiations often involved a number of parties. For example, one business deal involved a Singapore based cotton merchant, a bank in Hong Kong, and a company in

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28 Rogers Varner (partner, Varner Brokerage), in e-mail message to the author, March 26, 2007.
29 Ibid.
Australian.\(^{30}\)

On a daily basis the brothers conducted online exchanges from their offices in the Delta taking and placing orders for customers from over thirty countries, many of whom they never met personally. They also entertained visitors who traveled to Mississippi to establish contacts and negotiate transactions. In a single month in 2006, they hosted visitors from India, Singapore, China, England, and France.\(^{31}\) On another occasion, they entertained a sixteen-member Chinese delegation that traveled to the Delta visit both Varner Brokerage and the Greenwood based marketing firm, Staplcotn.\(^{32}\) According to Rogers Varner, visitors to the region “were here on business and always impressed at the high intensity of agriculture. There are not many areas of the world that are so heavily farmed as the Delta.”\(^{33}\)

The Varner brothers remained keenly aware of the constantly evolving market place and realized they would have to adapt if they hoped to survive in the international cotton trade. In 2007, Bryan Varner predicted the New York market would move from an open-outcry system of placing orders verbally and with hand signals on the floor of the exchange to an electronic system, which would reduce the need for brokers. He believed the company would be forced to move toward more consulting with less emphasis on executing transactions, but always within a global context.\(^ {34}\)

In 2012, after 142 years the open outcry system of trading in commodities officially ended, and the Varner brothers began to scale back their business with many family members

\(^{30}\) Ibid.
\(^{33}\) Rogers Varner, in e-mail message to author, 2007.
\(^{34}\) Bryan Varner, interview by author, 2007.
joining the steady outmigration from the Delta.\textsuperscript{35} For more than 50 years the family had facilitated international exchanges and the cotton industry.

**Remaining Competitive: Global Production Systems and Luxury Consumer Goods**

In the 1980s, Delta native Fred Carl and his wife were building a home and could not locate professional grade appliances for their new kitchen. Sensing consumer demand for high-end appliances, Carl—a housing a contractor—sketched out designs for a range, and in 1987 Viking Range Corporation of Greenwood, Mississippi, became the first company to produce professional grade kitchen appliances for homes.\textsuperscript{36} Over the years, Carl expanded the line to include refrigeration, outdoor kitchen equipment, small appliances, cutlery and cookware. When Carl and his team decided to improve and streamline their manufacturing facilities, they searched for the most productive and efficient systems in the global market place. Because of the continued innovation and expansion taking place at Viking, the company needed a manufacturing technique that was flexible and adaptable to the introduction of new products. The search resulted in an unusual collaboration: Viking Range and Toyota partnered to perfect the production of commercial kitchen appliances based on a system that had achieved success in the automotive industry. After several years of study and preparation, Viking launched its own Toyota-inspired Viking Production System. The “just in time” method involved every employee in problem solving so that adjustments were made quickly without a loss of valuable production time.\textsuperscript{37}

The Greenwood based company expanded into the international marketplace. By 2007

\textsuperscript{37} Viking Range Corporation, website.
Viking was shipping to distributors in 45 countries around the world with distributorships in ten countries in Central and South America, fifteen countries in Europe, and others in the Caribbean, Asia, North Africa, South Africa, the Middle East, and Australia.\textsuperscript{38} Viking employees traveled extensively, the company maintained offices in Europe and employed a sales manager in Thailand to handle the Asia-Pacific market. They worked with an export agent from San Diego who handled the Latin American market as well as the Middle East and Africa.\textsuperscript{39} The global exchanges continued as Delta employees traveled to international trade shows and foreign based distributors visited the manufacturing facilities in Greenwood where the company hosted international training sessions at least six times each year. Company executives in the Delta communicated weekly, and sometimes daily, with associates around the globe.\textsuperscript{40}

Carl transformed his company into a community that not only sold high-end kitchen appliances, but also promoted a particular consumer culture with advertising targeting customers drawn to luxury brands: “The Viking Hospitality Group was created to promote and savor the finer things—and just plain good things—in life. Comprised of the Alluvian Hotel, The Alluvian Spa, Giardina’s Restaurant, and the Viking Cooking School, the group delivers exquisitely genuine Southern hospitality.”\textsuperscript{41} The company had a profound impact on the appliance industry transforming consumer preferences in home appliances. In 2008 the housing market—which had been the driving force behind high-end appliance sales—began to collapse. Four years later, and Viking had cut its workforce from 1200 to 700 employees and owners decided to sell. In 2015,

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\textsuperscript{39} Jane Crump (Director of Human Resources, Viking Range Corporation), in e-mail to author, March 2, 2007.
\textsuperscript{40} Ibid.
\textsuperscript{41} Viking, website.
\end{flushright}
Fred Carl announced his new business venture—high-end modular homes.⁴²

For more than 35 years Greenwood has been home to another luxury goods company with a global presence, the John-Richard Collection. In 1946, Alex Malouf, Sr. opened a small furniture store that grew into one of the largest retailers in the region. In 1980, the family established a home accessories company, the John-Richard Collection, a spin off of the retail business. With only five employees, the John-Richards Company manufactured framed art for wholesale.⁴³ The product line grew to include lamps, mirrors, accessories, soft goods, and small furnishings, and the staff expanded to include designers who traveled the globe in search of new materials and emerging trends. In the late 1990s, the company maintained a show room in North Carolina, a manufacturing plant in Mexico, an office in India, and contacts in China and Asia.⁴⁴ John-Richard became an international leader in the design, manufacture, and sale of high-end home furnishings and accessories to both domestic and foreign markets. In 1998, the *Delta Business Journal* reported the firm provided 7,000 items to over 3,300 dealers and customers, including “Neiman Marcus in Dallas … Harrods in London and American Home in Kuwait.”⁴⁵ Under the leadership of Shane Malouf, the business restructured production in order to remain competitive. The company relocated the 600,000-square-foot Greenwood facility and opened an office and manufacturing plant in Vietnam.⁴⁶ In 2013, the John-Richard Company, headquartered in Greenwood, maintained warehouses and distribution facilities in Vietnam, India, China, China,

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⁴⁵ Ibid.
⁴⁶ Shane Malouf, “From Small Delta Beginnings,” 66.
Russia, Australia, and England, but employed only 200 locally.\textsuperscript{47}

**Blues Tourism: The Transnational Flow of Culture**

The growth of blues tourism in the Delta resulted from decades of increased national and international interest in authentic blues music. In the 1950s, both Big Bill Broonzy and Muddy Waters played to European audiences, initiating a period of blues revivalism that eventually worked its way back to the Mississippi Delta. At mid century, the path to international exposure almost always followed a period of time spent performing in the Chicago urban blues scene. John and Alan Lomax, along with Willie Dixon and other middlemen, paved the way for the introduction of American blues to the international music community with the process culminating in the organization of the American Folk Blues Festival, an annual European blues tour that lured American bluesmen to Europe for the next twenty years.\textsuperscript{48} Cultural historian Benjamin Filene provided telling evidence of the differences in American and British attitudes toward the blues: “When the Beatles arrived in America in 1963, they expressed their desire to see Muddy Waters and Bo Diddley. ‘Where’s that?’ a reporter is said to have replied. ‘Don’t you know who your own famous people are here?’ Paul McCartney responded.”\textsuperscript{49}

For years, widespread apathy toward the music and the black community hampered local recognition of the cultural importance of rural blues. Throughout the 1970s and 1980s, Mississippi blues music attracted more attention, and in the late 1970s two key events marked the beginning of the blues tourism industry in the Delta: the first blues festival was held in


\textsuperscript{49} Ibid.,123.
Greenville and the state’s first blues museum opened in Clarksdale.\(^{50}\) Change came slowly to the Delta, but dedicated blues enthusiasts continued to lobby for funding to promote blues tourism. Citing the “authenticity” of the Delta’s rugged style of blues music, born of hardship from African musical traditions, promoters scratched together funding for local museums and music festivals. Boosters of the region played on the sense of place that only the Delta could offer visitors. Writing for *Living Blues* in 2004, Jim O’Neal reported on the significant shift in local attitudes: “…the voice of the blues is more recognized and respected in Mississippi than ever, as officials, educators, musicians, and entrepreneurs rally to promote the blues as a historic treasure and ongoing tradition to the tourist industry. Whatever ironies may lie in the exaltation of a music born of poverty to boost the economy of the poorest state in the union, the fact is that Mississippi has finally realized that there is something to this business of Japanese and Norwegians and Californians showing up in search of blues sites and blues artists, buying bouquets at the local florist to place on some forgotten grave, or wandering around ‘across the tracks’ with guitars on their backs or cameras in their hands.”\(^{51}\)

Clarksdale was one of the first Delta communities to support the blues revival. Progress was slow, but visitors to the Delta Blues Museum numbered in the hundreds each month, reaching close to a thousand at festival time. In December of 2006 and January of 2007, the museum hosted guests from 25 states and seven foreign countries including Canada, England, Germany, Italy, Japan, New Zealand, and Holland.\(^{52}\) An avid promoter of the blues and owner of Cat Head Delta Blues & Folk Art in Clarksdale, Roger Stolle, has for years traveled with aging


\(^{52}\) Shelley Ritter (Director, Delta Blues Museum), in e-mail to the author, unpublished visitation reports for December of 2006 and January of 2007.
local blues musicians to Europe where they perform at blues festivals. Local bluesman, Lightnin’ Malcolm, said “Clarksdale has always had the talent, but has had no one to tie it to the rest of the world. People like Roger have done that.” The international music community reciprocated. From the late 1990s to 2007 the town hosted blues bands from England, Italy, Germany, Britain, and Canada, and Israel. Memorable performers included a Japanese bluesman who called himself “Gypsy,” and a female bass player from Amsterdam who traveled to the Delta to perform with T Model Ford.

The blues revival spread across the Delta. A few miles south of Clarksdale, Willie Seaberry, a sixty-year-old black tractor driver, welcomed visitors from around the world to his “jook joint,” better known as “Po’ Monkey’s.” Located on a gravel road just off highway 61, the dilapidated shack attracted national and international attention. Ellen Sweets of the Denver Post wrote, “‘Po’ Monkey’s’ has been featured in National Geographic, Lonely Planet, and the New York Times.... Japanese film crews have filmed it. Visitors from places as diverse as London and Brazil managed to find this oversized tar-paper shack….” It was not unusual to see tour buses from Memphis parked outside the unpainted tenant house, decorated year-round with multicolored Christmas tree lights. Beyond the juke joint scene, small towns across the Delta began to host small blues festivals with each competing for funds to restore blues sites or open a blues museum.

For a region and a state that was slow to recognize the cultural and economic importance of the blues, promoters seemed determined to make up for lost time. As late as 1997, a visitor to

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54 Roger Stolle, (owner, Cat Head Music, Clarksdale, Mississippi), in interview with the author, January 2007.
55 Ibid.
the Delta from the San Antonio Blues Society gave a disappointing assessment of local attitudes: “There is probably no place in the civilized world where the blues is less popular today than in the Delta.”

Ten years later, the state had formed the Mississippi Blues Commission and the Mississippi Blues Highway Association funded the placement of blues markers at historical sites. Local tourism bureaus and Chambers of Commerce enthusiastically promoted blues events. In 2007, the Delta Magazine listed nine blues events for May and June in the region, including the “Deep Delta” and “Crossroads Blues” festivals, a concert and recording session celebrating Big George Brock’s 75th birthday, the B.B King Homecoming commemoration, and one occasion dubbed “Farmer’s Market with the Blues.”

Actor Morgan Freeman, who grew up in the Delta and returned to live there after chasing Hollywood fame, partnered with Clarksdale businessman and attorney to promote the blues through a high-end restaurant and a down-to-earth blues club. Freeman attracted national and global media attention for the Delta blues tourism industry. According to local magazine and newspaper publisher, Scott Coopwood, “Luckett’s ideas and Freeman’s access to the worldwide media propelled Clarksdale to that next level. People from all over of the globe come to Clarksdale each day to see where many of the blues greats hail from. In fact, before Luckett got involved, Clarksdale’s tourism was almost non-existent. Now, more Europeans visit Clarksdale than any other town in Mississippi.”

Conclusion

Delta entrepreneurs and blues musicians have consistently adapted to and interacted with

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exogenous forces that impact and shape the Delta, and an international lens allows for a more nuanced understanding of the region and the technological changes that facilitated the rapid flow of goods, people, services, and culture to and from the region in the second half of the twentieth century. Local business leaders did not remain isolated or removed from modern businesses practices, methods of production, communication and global supply chains, but embraced them with both positive and negative outcomes for the Delta. Professor of contemporary history, Alfred Eckes, explained the significance of modern globalization for average individuals with access to global systems:

…it is important to emphasize that contemporary globalization involves far more than economic interdependence resulting from trade and investments among nations. In the opinion of business strategists, globalization brings a fundamental shift in outlook—one that requires a global perspective rather than an emphasis on national markets—and it is synergistic. The changes in technology—particularly in transportation and communications—have dynamic and disproportionate impacts on other variables, or to state it differently, the result is more than the sum of its parts… Increasingly, business began to think of a world without boundaries… Contemporary globalization also permits ordinary individuals to network and communicate cheaply, rapidly, and regularly, widening and deepening personal and cultural relationships.  

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CHAPTER VII

CONCLUSION: SIMPLE COTTON AND CATFISH?

“The South has become a formula….The result is a South that is easily pegged, easily caricatured, easily explained….That is an injustice…”
Edward L. Ayers, Historian

“This society is almost primitively simple on the surface and almost incomprehensibly complex underneath.”
David L. Cohn, Deltan, 1944

The human brain seeks simplicity. Every successful marketing or advertising agency understands the impact of short simple phrases as in “Just do it,” “Rethink possible,” or “We understand.” The same need for simplicity applies to understanding the historical evolution of the Mississippi Delta, which many summarily condense to a story of wealthy white racists and poverty stricken black activists, the oppressors and the oppressed. Blues historian Ted Gioia offered a highly dramatized description of the Delta: “Here it seemed as if a Third World country had been abandoned in the heart of the United States, left to fend for itself, with its simple rural staples of cotton and catfish, in the midst of a booming modern economy whose benefits it did not share.” But the region should not be reduced to a string of hyperbolic phrases, especially

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when they ring true. A more comprehensive understanding of the history of the Delta is far too important with implications that transcend the region, for as James Cobb concluded, “the same forces that helped to forge and sustain the Delta’s image as the South writ small may one day transform the entire nation into the Delta writ large.”4 This study challenges perceptions of the Delta as a place isolated from and immune to modernization. Instead, the research places the region and its people at the center of major economic, scientific, technological, and political global transformations occurring during the twentieth century.

Two fundamental convictions influenced the research: first, human beings rarely make rational, unbiased decisions, and second, the global market system is neither moral nor just.5 That is not to concede that actions should not be taken to correct injustices, but to acknowledge the tension that exits between what historians Kenneth Pomeranze and Steven Topik refer to as the “‘moral economy’—what people perceive to be just,” and the often brutal and exploitative nature of the “market economy.”6 It hardly seems reasonable or rational to spend federal tax dollars to subsidize the production of surplus commodities, and just as African Americans gained access to decent jobs in industry plants began to move overseas or close altogether. Even homegrown industries like Viking Range and catfish processing plants remain vulnerable to shifts in global market prices and the rise of foreign competition.

This study highlights the dynamic and innovative character of the region. Traditional analyses of American agricultural development have focused on mechanization with little attention to the importance of biological innovation. American farmers engaged in selective

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breeding in both plants and animals and experimented with new crop varieties prior to 1900, but the emergence of genetic science at the turn of the century induced intensive efforts to improve crop varieties. Geneticists in the Delta were leaders in the field, which helped lay the foundation for the biotech revolution at the end of the century. The Delta developed a tradition of scientific innovation and engineering and created a vibrant agri-research community that provided the most advanced methods of production to local producers and the world.

The region produced a significant number of global entrepreneurs who adopted modern transportation and communication systems, along with the most advanced production methods to introduce goods and services into the marketplace and remain competitive—and at times dominate—national and global markets. Delta entrepreneurs operated lean, highly efficient businesses that kept the need for labor at the minimum and relocated warehouses or facilities overseas when competition increased. While these businesses contributed to the local economy and provided a number of good paying jobs, the overall impact on poverty in the Delta was minimal. White Delta businessmen were hardly backward or provincial, but operated in tandem with the modern business philosophies and management styles of other U.S. companies and many industrialized world.

The Delta experienced an ongoing transnational flow of people into and out of the region. In the Delta, food traditions—such as local hot tamale vendors—and anecdotal evidence indicates the presence of migrant Latino workers in the latter half of the nineteenth and early part of the twentieth century. Mary Hamilton’s autobiography documenting life in the timbers camps is filled with references to European immigrants including Swedes, Englishmen, and “hundreds of Slovenians,” along with African Americans clearing the Delta prior to and around the turn of
the century. The recruitment of Italian and Chinese laborers to the region has been well documented, and during World War II Italian and German prisoners of war were placed in the Delta to deal with labor shortages. In the past few decades, Latino construction crews and farm laborers entered the labor pool. Most recently Delta farmers have turned to Eastern Europe and South Africa to meet labor needs through the U.S. Department of Labor H2A Temporary Agricultural Workers program, while the region’s hospitals employ a Filipino nurses to meet staff requirements. Others have been drawn to the region through scientific, cultural, and student exchange programs, and the local blues industry has documented the arrival of thousands of tourists each year. The sheer number and frequency of exchanges between the agricultural research and business community and visitors from other countries is astounding.

The Delta engaged in cultural and ideological exchanges with the international community. Companies in the region promoted high-end luxury goods and experiences influencing consumer preferences and purchasing habits across national boundaries. In turn, immigrants to the Delta introduced new food traditions through Chinese, Italian, Lebanese, Mexican, and Japanese restaurants and tamale stands throughout the region. And global and national ideological trends were adopted and shaped to fit the purposes of local elites.

The flow of outside capital into the Delta provides additional evidence of the region’s integration and participation in the international economic system. This study emphasizes the influence of British investment in the Delta and Pine Land, which funded biological innovation and had a significant long term impact on global agriculture. The British sponsored innovations developed at D&PL influenced national production methods and spread to the global

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agricultural community. Monsanto and Prudential are representative of the large insurance and chemical companies that have injected capital into the region and foreign investors continue to purchase land in the Delta.

The study documents the fact that the Delta was thoroughly integrated into the global economy, and the region never established a solid economic foundation due to constant fluctuations and disruptions in the international commodities market coupled with a devastating flood and biological disaster followed by the Great Depression. Poor whites and African Americans in the Delta fell further behind in the 1950s with full mechanization as much of the rest of the nation experienced a period of economic prosperity. Just as racial barriers began to fall in the 1970s and 1980s, global competition intensified manufacturers began to relocate to other countries.

The relationship between the Delta and international community was far more complicated than the flows of goods, technology, ideology, capital, and people. The international commodities markets and disruptions in those markets shaped the economic, social, and political structures of the Delta. Even if cotton produced in the region was sold to U.S. textile mills, the global market determined the price—and the same was true for all commodities. The implementation of federal farm subsidy program during the Great Depression illustrates the power of the international market to the influence political economy of the Delta, and, in turn, shape U.S. farm policy and trade policy.

Two critical elements are missing from this study: an examination of the African American experience in the Delta from a global perspective and an analysis of the region’s primary resources—land and water—within an international framework as the world moves
toward a critical period in meeting the needs of a growing global population. The next challenge Deltans will face will not be low international commodity prices, but the depleted water aquifers, and it is almost certain that corporate and foreign land acquisitions in the Delta will increase as agriculture continues to consolidate into larger commercial operations. Trends indicate transnational agri-corporations with large land holdings and access to high-tech precision methods may dominate the region. Even so, the region has been and will remain deeply integrated into the international community, with local and global forces shaping the future of the Mississippi Delta.
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Delta Business Journal
Delta Democrat Times
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Delta Statement
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Food Engineering
Fortune
IRIN Africa
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Los Angeles Times
Mississippi Business Journal
Mississippi Farm Country
Pittsburg Gazette

StaplReview

St. Louis Dispatch

The Agro Business Examiner

The Bolivar Commercial

The Commercial Appeal

The Economist

The Guardian

The New York Times

The Philadelphia Inquirer

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The Wall Street Journal

Times of Zambia

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Western Civilization to 1648
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U.S History since 1877, 2008-2009
Participating Faculty, Workshop Facilitator, Delta Center for Culture and Learning
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National Endowment for the Humanities Landmarks of American History and Culture Workshop,” The Most Southern Place on Earth: Music, Culture, and History in the Mississippi Delta,” offered through the Delta Center for Culture and Learning
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History 202 United States History from 1877

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