THREE ESSAYS ON THE PINE STRAW INDUSTRY

IN A GEORGIA COMMUNITY

Except where reference is made to the work of others, the work described in this dissertation is my own or was done in collaboration with my advisory committee. This dissertation does not include proprietary or classified information.

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THREE ESSAYS ON THE PINE STRAW INDUSTRY IN A GEORGIA COMMUNITY

Vanessa Casanova

A Dissertation

Submitted to

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DISSERTATION ABSTRACT

THREE ESSAYS ON THE PINE STRAW INDUSTRY

IN A GEORGIA COMMUNITY

Vanessa Casanova

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This dissertation examines the pine straw industry and its interaction with labor, local communities and land in a community in Georgia. As a relatively new industry within the forest products sector, the pine straw industry provides local forest landowners with additional income from their forests and Latino immigrants with year-round employment.

The first study is entitled, "A Political Ecology of Pine Straw Harvesting." With a political ecology framework, I examine the interaction between government policies and programs, which precipitated the commodification of pine straw and how they contribute to a dependence on an immigrant workforce, the majority of whom are undocumented. "Raking it In: The Commodification of Pine Straw in the Southeast" is

the second study. In it, pine straw is examined as a non-timber forest product and comparisons are made between the harvesting of this particular non-timber forest product on private land as opposed to publicly owned and Forest Service land. I use the concepts of access to, and commercialization and conservation of the resource as a point of comparison.

Finally, I examine the role of forest labor contractors and social networks in procuring labor for this particular industry in the last study entitled, "In a Class of Their Own: Forest Labor Contractors in the Pine Straw Industry."

Forty-two pine straw harvesters, four forest labor contractors, eight landowners and four pine straw dealers were interviewed for this study. Interviews were semi-structured face-to-face interviews or telephone interviews. Data collected focused on the length of time each actor had been involved in the industry and precipitating factors to their involvement. For harvesters, the focus was on how they obtained work, how they were paid, harvesters' basic ecological knowledge and information related to social networks. These interviews closely paralleled interviews with pine straw dealers who were their indirect employers. Landowner interviews involved questions related to the amount of forest land owned, how their land was used prior to planting it in timber and their experience with the industry and the Latino labor force.

This research provides a look at a specific industry within the Southeast that has grown out of land use changes and immigration policy. It is one centered on a once marginal forest by-product, which now contributes more than $60 million annually to Georgia's economy. Although it has a largely regional market, it benefits from a globalized labor force.

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I thank my committee for their support through guidance of the research and review of this work. I also thank the National Network of Forest Practitioners for introducing me to an amazing community partner, who invited me into the community and inspired me with her passion and dedication. I am most grateful to the community of pine straw dealers, forest landowners, forest labor contractors and pine straw harvesters who took time away from work to share their stories with me.

To my family and friends, many thanks, especially Brinda Sarathy for all her words of encouragement; to my husband, Mostafa Malki; and to my son, Aaron Malki, for being my constant companion through the research and writing of this dissertation.

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CHAPTER 1

INTRODUCTION

Recent scholarship on forest labor has revealed the pervasiveness of Latino immigrants, both documented and undocumented, throughout a variety of forest industries and across widespread geographical regions of the United States (Ballard and Huntsinger 2006; Brown 2001; Casanova and McDaniel 2006; Emery, Ginger and Chamberlain 2006; Hamilton 2004; McDaniel and Casanova 2003, 2005; Moseley 2006; Sarathy 2006). Researchers attribute this occurrence to a number of reasons: forest industry restructuring, residual effects of agricultural labor abundance, spillover from guest worker programs, or the lack of native-born workers willing to perform menial tasks in the forests (Casanova and McDaniel 2006; Emery et al. 2006; Hamilton 2004; McDaniel and Casanova 2003, 2005; Moseley 2006; Sarathy 2006).

The pine straw industry in the southeastern U.S., like many other industries in the region, has drawn Latino immigrants away from jobs in agriculture and they now dominate the workforce of this particular industry. Traditional gateway cities such as Los Angeles, Houston and New York have been replaced by rural localities as migrant and immigrant destinations.

This dissertation examines three distinct but highly related themes: land use change and its political origins, the commodification of a non-timber forest product and

the effects of immigrant social networks. Each of these themes provides a framework through which to examine the presence of Latinos within the pine straw industry. In order to understand this occurrence, it is crucial to first comprehend changes in land use that preceded the use of this particular labor force and how these changes contributed to the attraction of and dependence on Latinos. Further, it is also useful to examine this occurrence from the standpoint of the commodification of nature. By commercializing a once marginal by-product of commercial forests, an industry based on a non-timber forest product has been created, and thus jobs have been created to support this industry. These jobs, however, are low-paying and informal and have resulted from an overall restructuring (decentralizing, deskilling) of manually intensive forest work. The resulting reliance on a workforce willing to accept informal, contingent labor leads to a need to acquire a workforce. Although the Latino immigrant population in the Southeast has grown at an astounding rate (Kandel and Parrado 2005; Passel 2005), for various reasons, there often exists the need to recruit new workers into the industry. Pine straw dealers often tap into immigrant social networks to procure labor. Through an examination of social networks within this particular industry, we begin to see who benefits from access to these networks and how. This study examines a particular place within the larger space occupied by the pine straw industry in the Southeast. Pine straw harvesters, landowners and pine straw dealers from two pine straw producing counties in Georgia are the setting of this research.

Each of these themes comprises a separate chapter within this dissertation. Chapter two is a study of the pine straw industry employing the framework of political ecology. In Chapter two, I discuss changes in land use and the physical landscape within

the particular study area and how these changes are accompanied by political and social change.

Chapter three is an analysis of pine straw as a non-timber forest product in the context of private property. The vast majority of scholarship on non-timber forest products in the U.S. focuses on resources located in publicly owned lands and often in the Pacific Northwest. This chapter provides a perspective from the Southeast, where more than 90% of land is privately owned.

In Chapter four, I examine co-ethnic exploitation in immigrant social networks. Forest labor contractors within the pine straw industry are often Latinos with long-standing ties to the local community. Pine straw dealers depend on them to hire and organize harvesters, who are, more often than not, undocumented Latinos, mostly from Mexico. Forest labor contractors and pine straw dealers both benefit from their relationship with harvesters while harvesters often find themselves in exploitative relationships with contractors.

In general, this research demonstrates the interconnectedness of relationships based on power, the commodification of once marginal forest by-products, and the use of immigrant labor. Political ecology, assessment of access, commercialization and conservation of a non-timber forest product and an examination of immigrant social networks are employed to study the pine straw industry in a community in the Southeast.

CHAPTER 2

A POLITICAL ECOLOGY OF PINE STRAW HARVESTING

Land is often seen as a source of power and status in the southeastern U.S. The economy of the South has been largely tied to the land and agriculture has always played a large role in this economy. Throughout much of the Southeast, however, that tide has shifted and forestry has emerged as the dominant economic actor in the region. A vast body of literature supports this case (Bailey et al. 1996; Bliss, Walkingstick and Bailey 1998; Joshi, Bliss and Bailey 2000; McDaniel and Casanova 2003). Throughout the region, land use is shifting from row crop agriculture to forestry, which in turn supports the timber industry. Pine plantations have replaced once dominant fields of cotton. Further, there has been a shift from hiring local black manual laborers for fieldwork to subcontracting Latino H2-B guest workers and undocumented migrant and immigrant workers (Casanova 2003). Latinos now dominate certain sectors of forestry (Ballard and Huntsinger 2006; Casanova and McDaniel 2006; Emery, Ginger and Chamberlain 2006; Hamilton 2004; McDaniel and Casanova 2003; Sarathy 2006). This new labor force has allowed for the flourishing of a new sector in the timber industry in the Southeast.

The pine straw industry has taken root in this region over the past twenty years. Indeed, harvesting pine straw is promoted by state Extension agencies as an additional

source of income for forest landowners (Duryea 1988; Duryea and Edwards 2004; Stanton and Hamilton 1995; Stanton 1986; Taylor and Foster 2004). Pine straw, used in landscaping and construction, is providing substantial income to forest landowners while employing mostly undocumented Latino harvesters.

This paper uses a political ecology framework to explore how land uses have changed, the impact of these changes on labor, and the ecological consequences of power controlling land and labor. This study is an examination of a local system of production and its connections to state and global economies. The pine straw industry in a specific community in Georgia is used as a case study. This paper examines this industry, including the participation of Latino migrants and immigrants, and their interactions with landowners and straw dealers. Despite the fact that pine straw harvesting provides year-round work in localized spaces, the industry draws from a mostly Latino, mostly undocumented workforce.

Primarily employed by researchers in developing countries (Alexander, Weigand and Blatner 2002; Blaikie 1985; Bryant and Bailey 1997; Robbins 2004; Vazquez-Leon and Liverman 2004), political ecology has emerged as a useful framework for researchers in the market economy of the U.S. to explain political influence over ecological changes (Ballard and Huntsinger 2006; Emery 1998; McCarthy 2002). Political ecology, as employed by some authors (Bryant and Bailey 1997) stresses the political over the ecological. That is, they emphasize the political processes that lead to ecological changes rather than the changes themselves. Blaikie and Brookfield (1987) however, stress that it is a convergence of the relationships between land users, land managers and the land,

thus it is the interaction between policy, people and land that are the focus of political ecology. There is also often an emphasis on linking the local with the global. Local ecological changes can be traced to global pressures (Blaikie 1985).

Recent scholarship employing political ecology is often framed in the context of particular environmental or economic policies that spur change in the physical environment or access or tenure arrangements. In their study of the political ecology of land use change in northern Mexico, Vasquez-Leon and Liverman (2004) find that policies aimed at economic development were favored when dealing with natural resources. And, although policies now exhibit much more environmental awareness, they fail to consider all actors. Other actors include large cattle-ranchers to small-scale farmers. Thus their policies exhibit a class-based bias and ignore the need for land conservation, sustainable development and rural livelihoods. The interrelationships between state policies, land and local actors are emphasized in this study.

Four themes emerge from political ecology to offer the foundation of a framework to assess the pine straw industry in this particular community. The first is that social relationships, one of which is power, are central to ecological change. Ecological change can include the transformation of land from row crop agriculture to pine plantations. Although some might argue that a change from row crops to trees is a positive ecological change, political ecology allows for the exploration of the change across many dimensions. Bryant (1992) notes the importance of evaluating the effects of environmental change on political and socioeconomic relationships. Sheridan (1995: 45) states that the "exploitation, distribution, and control of natural resources is always

mediated by differential relations of power within and among societies." In the case of pine straw, control over land and labor has consequences for the ecosystem. The transformation from row crop agriculture to pine plantations requires less labor, but straw collection may have a detrimental impact on land and health of forest resources, particularly in the case of over-harvesting (Pote et al. 2004).

The second theme is that ecological changes are social and political in origin. Political ecology is effective for analyzing issues related to human and environmental interaction and to understanding the politics of environmental change. It stresses the interconnections between socio-cultural and ecological systems. Government programs influence ecological changes, usually with the intention of making a positive change. However, through immigration policies that punish employers for formally hiring undocumented workers, they also inadvertently help to maintain a low-paid labor force within particular industries, such as pine straw. Race and class further play a role in change. The dominant class of forest landowners in the study area is white males while the majority of forest workers and pine straw harvesters are undocumented Latino immigrants. The landed elite, particularly in the historical context of the rural South, has the power to influence change where it is beneficial. In particular, it is useful for examining why one labor force is favored over another and how this contributes to or is influenced by changes in the physical landscape. An undocumented, informal Latino workforce is cheaper than a native workforce, thus, they help sustain an industry that might not otherwise be viable.

The third theme is that examining these changes unveils social relations of production and changes. The commodification of pine straw is a result of a number of forces: a government program designed to get land out of farming, a willing and able workforce that exists in a precarious situation due to enforcement and tightening of immigration policy, and forest landowners looking for alternative income from their investment. There is also the issue of political power that allows for the use of migrant labor, which effectively self-exploits, undercuts the local labor market and is subsidized by the public in a variety of ways to be detailed further throughout this paper. A political ecology framework lends itself well to the analysis of this situation.

The fourth theme is that the emphasis of analysis in political ecology should be on actors and their interrelationships. In the case of pine straw, I narrow it down to include harvesters – a politically and economically marginalized workforce; landowners – historically white, with long ties to the community; pine straw dealers and forest labor contractors– and how they relate to the physical environment and governmental policies and programs. The goal of this research is to contribute to the political ecology literature through the examination of a case which involves a recently commodified resource in an industry which widely employs Latino immigrant labor.

The remainder of this paper is divided into four parts. I begin with a discussion of the context of the study area. This is followed by an overview of pine straw as a commodity. I next present the methodology employed in this study. The case study is then presented followed by discussion and conclusions.

The Context

Two-thirds of the state of Georgia is forested (Georgia Forestry Association 2005). All of the land used for the production of pine straw in this study is privately owned. In fact, 93% of Georgia's commercial forests are privately owned (Georgia Forestry Association 2005). This percentage is fairly representative of the rest of the Southeast where a large percentage of land is privately owned, either by corporations or individuals. Much of the land in the study now in timber and pine straw production was previously farmland, a common trend throughout the Southeast.

The dependency of rural areas on extractive industries for income means that they are often at the mercy of fluctuating prices for such resources. In southeast Georgia, where fields of cotton once dominated the landscape, there has been a transformation. Farmers first abandoned cotton for produce crops and more recently have been moving out of agriculture all together. Prompted by government programs such as the Conservation Reserve Program (CRP), many acres of farmland were taken out of production as a way to preserve the soil and planted in slash pine during the initial CRP sign up in the 1980s. A precipitating factor for getting involved in forestry, mentioned by all landowners interviewed, was the CRP. In the mid-1980s, the Food and Security Act establishing the CRP was introduced as a way to take highly erodible soils out of farm production. The majority of landowners interviewed in this study indicated that some or all of their land was planted in trees as a result of the CRP. A large number of acres in the study area were enrolled in the initial 10-year contracts in the mid-80s. The majority of farmers

who enrolled planted their fields in slash pine. Contracts lasting ten years stipulate that landowners must neither harvest nor thin trees or gather straw until the contract expires. It is for this reason that all of the landowners interviewed did not re-sign at the end of their CRP contracts. At one point, one of the study counties had 24% (over 20,000 acres) of farmland under CRP contract (Personal communication, USDA, November 6, 2006). That number has since dwindled and it is expected contracts on 96,000 acres throughout the state of Georgia will expire in 2007. In County A alone, only 7% of farmland is still under CRP contract and 17% of those contracts will expire in 2007 (Personal communication, USDA, November 6, 2006.) This record number of acres coming out of contract in the next year could mean a flooding of the timber and pine straw market. County A encompasses over 235,000 acres and of that, 22% is forestland; County B encompasses over 192,000 acres and of that 29% is forestland.

In summary, the two counties have experienced a reversal in land cover. For example, in 1974, County A was dominated by agriculture – 45% of its land cover was in agriculture, while only 20% was evergreen forest. In 1998, agricultural use of land had dropped to 25% while evergreen forest cover increased to 30%. Similar changes have occurred in County B. The changing physical landscape has been accompanied by changes in the social landscape.

The southeastern U.S. has seen significant increases in its Hispanic population as workers have sought out employment opportunities beyond historical migrant gateways such as California, Texas, and Florida. Recent studies have indicated that the rate of increase of Hispanics in rural areas exceeds that of Hispanic population growth in

metropolitan regions (Kandel and Parrado 2005). States like Georgia, Alabama, Tennessee, North Carolina and South Carolina have seen their rural Hispanic populations increase at a level beyond 300% in the ten years between 1990 and 2000 Hispanic population has increased 500% to 1000% in some counties (Passel 2005). Kandel and Cromartie (2004) attribute this increase to 1) saturated labor markets in urban gateway areas such as Houston or Los Angeles, 2) dispersal of migrants away from states along the Mexican border resulting from increased border enforcement, and 3) employer recruitment from nontraditional, rural areas.

In economic terms, the Southeast was one of the fastest growing regions in a variety of industries from 1990 to 2000 (Pew Hispanic Center 2005). Latinos found work in a variety of settings with construction providing a great deal of work in recent years. While more Latinos (both foreign and native-born) found employment at higher rates in 2004, their earnings dropped by 2 percent in 2003 and 2004. At the same time, earnings for non-Hispanic whites, blacks and Asians increased. Since 2000, 70 percent of foreign-born Latino workers have been undocumented (Passel 2005). Agricultural communities in the South are no strangers to migrant workers. They have seen their share of Hispanic migrant farm workers, who for years have transited through the Southeast harvesting oranges, tomatoes, potatoes, sweet onions and numerous other crops. In recent years, the region has experienced a wave of Latino immigrants who have established roots working in such industries as poultry production, carpet manufacturing and forestry (Casanova and McDaniel 2005; Hernandez-Leon and Zuniga 2000; Kandel and Parrado 2005). The changing ethnic composition of rural areas, coupled with restructuring of particular industries has lead to changing labor markets within particular

sectors of forestry. The forest products industry in the Southeast is integrating large numbers of Hispanic workers into various sectors. Hispanics are employed in logging and millwork operations throughout Alabama. Hispanic workers, whether immigrant, undocumented or H2-B guest workers, now dominate the forest management sector where they perform the majority of tree planting and herbicide application. Guest worker programs are now seen as potential points of entry for migrants to other industries in forestry. It is estimated that 90% of pine straw harvesters are undocumented immigrants and mobile workers, mostly Mexican. The political culture of the study area has created a shadow economy occupied by migrant workers and undocumented immigrants of Latino heritage who, many might argue, have displaced black workers as the cheapest labor in the region (Casanova 2003).

Pine Straw

Pine straw is commonly used in landscaping as mulch and for aesthetic purposes throughout the United States, but it is particularly popular throughout the Southeast. Pine needles tend to interlock, holding neatly in place when spread. It also will not float in water, like pine bark nuggets and other woodchips. These qualities have made pine straw very desirable to professional landscapers and pine straw can be seen in front yards, shopping strip-malls and golf courses throughout the South. The straw provides not only a way to trap moisture but also offers excellent protection from soil erosion on construction sites.

The commercialization of pine straw has resulted in its growth in popularity over the past twenty years. It is sold on the wholesale and retail level, from super chain

one-stop retailers to roadside vendors. Raking can begin as early as six years after planting and can continue from the initial thinning to harvest. In the study area, it is harvested mostly from slash (*Pinus elliotii*) and longleaf pine (*Pinus palustris*) with longleaf needles or straw being the most desirable. Straw from loblolly (*Pinus taeda*) is also harvested, but fetches a much lower price than that harvested from other species. Consumers want needles that are brighter in color and that take longer to decompose. Thus, there is a marked preference for longleaf pine straw, followed by slash.

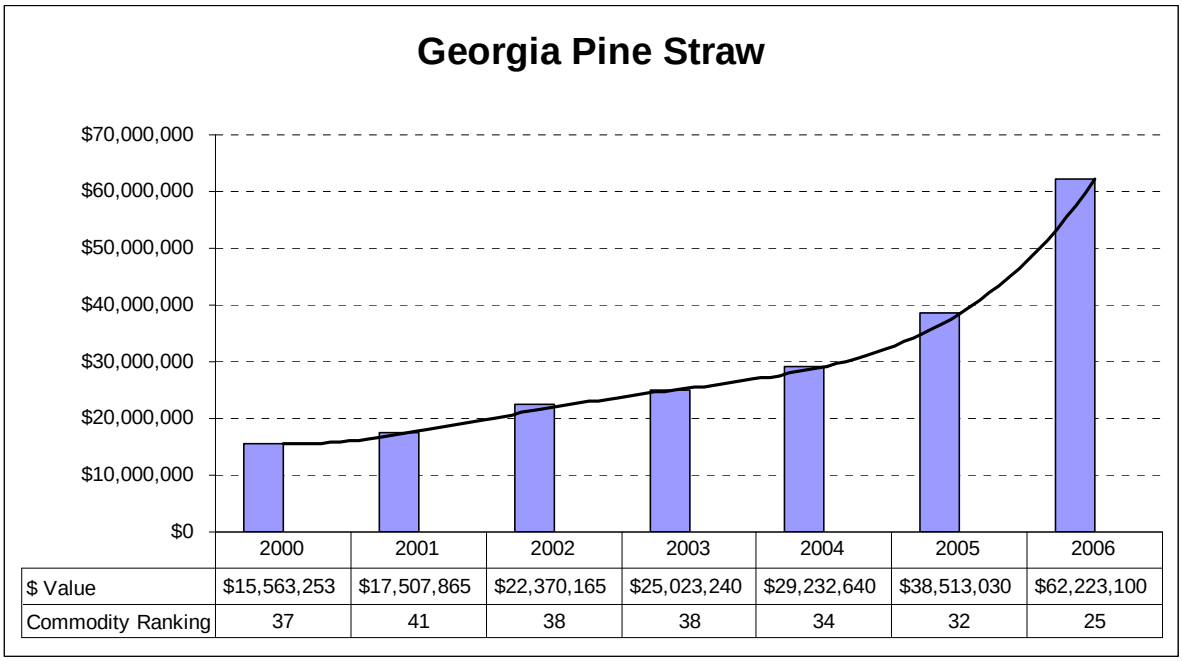
As a commodity, pine straw has a primarily local market, with the majority of sales occurring within a 500-mile radius of central Georgia. Because pine straw can be harvested from the same tract as frequently as every year (although not recommended), it is an activity that provides workers with relatively stable employment that is close to home. This activity is largely unregulated and occurs on a contingent basis – harvesters generally work as subcontractors through informal arrangements. Work varies throughout the year with the heaviest harvesting taking place in early spring and early fall, when demand for straw from landscapers increases. The work takes place on privately owned pine plantations and is usually performed by crews of about 10 people. It is tedious work; workers must first rake pine needles into piles from which they pick out any woody debris. After this is accomplished, they begin the task of making bales. The straw is packed into homemade box-balers and packed into a tight bale. Workers then secure bales with twine. It is later loaded onto both open trailers and enclosed containers and hauled off to market.

Pine straw differs from other non-timber forest products such as galax (*Galax urceolata*), a short understory evergreen found in the Appalachian Mountains or salal

(*Gaultheria shallon*), a shrub found in Washington's Olympic Peninsula. Both galax and salal are harvested as a part of the multimillion dollar floral greens industry (Emery et al. 2006; Ballard and Huntsinger 2006). Unlike these floral greens, pine straw is not a separate plant species but rather a bi-product of a natural biological process, the shedding of leaves (or in this case needles) from trees. This non-timber forest product does not regenerate itself; it is not cultivated. It is a true joint-production. Forest landowners cannot grow straw without trees and vice versa. Although the weather has a fair amount of influence on how much litter a tree will drop, landowners can control how much litter is produced by spacing their trees and thinning. In addition, pine straw is not necessarily seen as a marginal good compared with the value of timber. A number of landowners expressed their desire to manage their land only for straw and to never harvest their trees.

In 2006, pine straw contributed over $62 million to Georgia's economy (Boatright and McKissick 2006). This figure has quadrupled since 2000, the first year in which the Center for Agribusiness and Economic Development compiled data pertaining to pine straw as a separate commodity. As a commodity, pine straw's importance continues to increase. In 2001, on a list of 60 agricultural commodities in Georgia, pine straw ranked 41st. By 2006, its ranking had risen to the 25th position, with broilers taking the top spot.

Figure 1.1 Georgia Pine Straw's Economic Importance

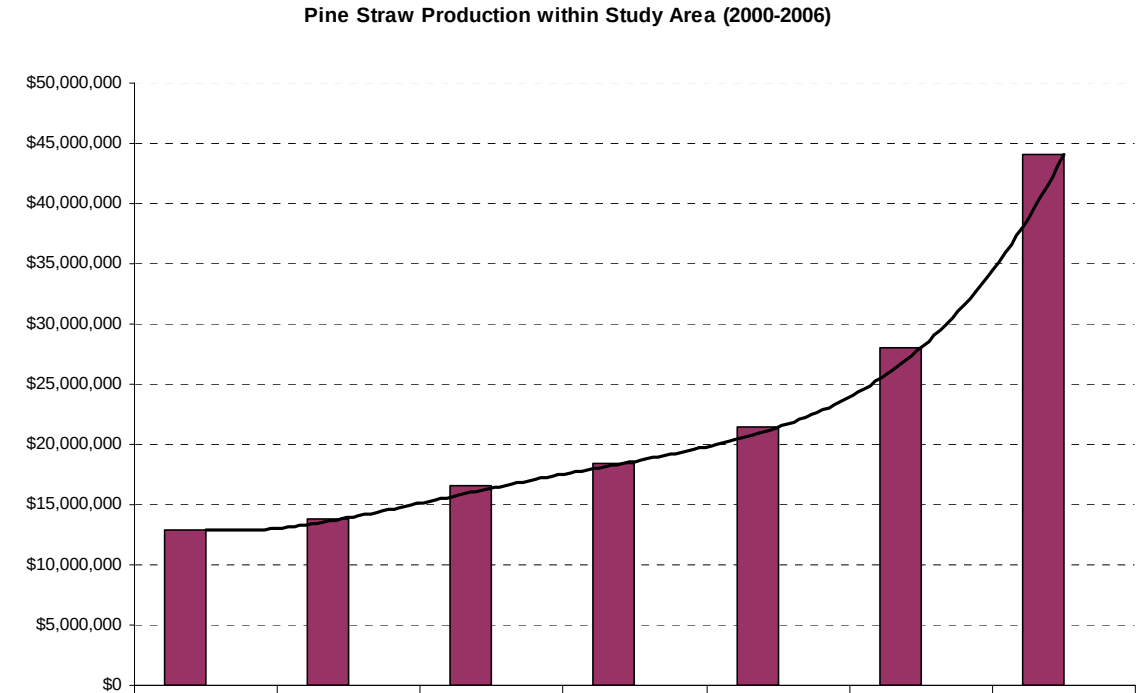


	2000	2001	2002	2003	2004	2005	2006
$ Value	$15,563,253	$17,507,865	$22,370,165	$25,023,240	$29,232,640	$38,513,030	$62,223,100
Commodity Ranking	37	41	38	38	34	32	25

Source: Boatright and McKissick 2006.

Within the study area, pine straw represents the 11th most important agricultural commodity. Its value has grown by almost 60% since 2000. In 2006, this region contributed $44 million to Georgia's economy. This constituted 71% of the total pine straw revenue in the state.

Figure 1.2 Pine Straw Production Within Study Area (2000-2006)



	2000	2001	2002	2003	2004	2005	2006
$Value	$12,943,073	$13,809,080	$16,553,625	$18,483,075	$21,435,610	$28,035,830	$44,104,500
Percent Change	0	6.69%	19.87%	11.66%	15.97%	30.79%	57.31%

Source: Boatright and McKissick 2006.

Methodology

This is a study at the micro-level of an industry that exists in many parts of the Southeast and as far west as Arkansas, Texas and Missouri. Pine straw is a major commodity in North and South Carolina, Florida and Georgia. This is a case study: a snapshot in time of an industry in a particular geographic location. I employ a political ecology framework to examine the relationships between actors in this industry and how these relationships and state policies influence change in the physical and social landscape.

The study occurred in a two-county area of Georgia. The particular study area was selected for a number of reasons. First, the two counties selected are among the top ten pine straw producing counties in the state of Georgia. As one key informant put it, "ninety-five percent of forest landowners in the area are harvesting their straw; the other five percent call me every day to figure out how to get into the business." (Interview II, May 2006) To protect the anonymity of informants, the counties (when mentioned) will be called County A and County B. Both counties are heavily planted in either pines or agricultural crops although occasional pecan orchards can be seen throughout the area. Most harvesters also report working in the surrounding counties of the region.

The area was also selected because it is one with a settled Latino population. Although Latino migrants still transit through the area, coming and going with the seasons, there are significant numbers of Latinos who have settled in the area and call it home. In response to this, a former migrant worker established an organization dedicated to helping Latino migrant farm workers and the immigrant community in the surrounding area. It is through this organization that key issues surrounding Latinos in the pine straw industry were initially identified.

The ratio of white to black residents is about 3:1 in both counties, although County A has four times the population of County B (U.S. Census Bureau 2000). The black population in both counties is poorer than the white population. In County A, 32% of black households earned less than $10,000 per year, compared with fewer than 14% of white households in the same category (U.S. Census Bureau 2000). Poverty is often tied to unemployment and blacks are unemployed at higher rates than whites. In 2006, blacks were unemployed at more than twice the rate of whites and by a third more than Hispanics. The average unemployment rate in the region was 5.5% (Bureau of Labor Statistics 2006). Although census data shows that Latinos account for 8.9% of the population (U.S. Census Bureau 2000), they often go uncounted in official records. In addition, due to the high concentration of agricultural crops, the numbers of Latinos may rise during harvest months and fall at other times of the year.

The methods employed in this study were qualitative in nature, using ethnographic research tools. Ethnography describes a culture or community and involves both listening and watching (Bernard 1995). Ethnographic and qualitative research methods are often used to describe contemporary events or occurrences in depth as opposed to explaining why they occur (Yin 1994). These methods are used when the focus of a study is on the process of events as they unfold, within their particular context, rather than on an end result (Yin 1994).

I began this research with preliminary interviews in the fall of 2004. In a prior study examining the increasing use of H2-B visas to recruit and hire guest workers from Mexico and Central America to reforest the Southeast, a number of the guest workers interviewed had also spent some time harvesting pine straw in northern Florida and

southeast Georgia (Casanova 2003). Participant observation allowed me to make the workers comfortable with my presence while at the same time documenting the nature of the work and conditions associated with packing pine straw. Participant observation takes many forms, from a complete participant in which a researcher assumes a covert role within a group for the sake of gaining information to being a complete observer in which the researcher is detached and records information at a distance (Bernard 1995). My role was somewhere in the middle: participant as observer. I did not conceal my intentions to the group. Neither did I attempt to 'go native'. Rather, I spent many days at a time with particular people. With pine straw harvesters, this meant rising early and staying in the field for the duration of the day. More than just conducting interviews, I participated in their daily lives through interaction. The fieldwork transpired over seven months between 2004 and 2006. An interview guide was used to help shape the interviews with both landowners and harvesters (Appendix A; Appendix B).

Participant observation, semi-structured and unstructured interviews were undertaken with 46 pine straw harvesters, eight landowners and four pine straw dealers for this study. Of all harvesters contacted to participate in the study, three refused. All landowners contacted participated in the study. Nine additional pine straw dealers refused to participate in the study. Within each of these categories there exist differences and similarities: Latino harvesters include forest labor contractors who are, for the most part, documented Latinos and former harvesters. Harvesters interviewed were mostly male, but I was able to interview eight women. All of the harvesters were undocumented except for six. Out of these six, four were forest labor contractors that are either U.S. citizens by birth (of Mexican origin), naturalized citizens or permanent residents. None

were originally from the area, having migrated from Texas or Mexico and becoming permanent residents during the Immigration Reform and Control Act of 1986. Although I did not systematically interview African Americans for this study, they represent the local, native labor force that, as previously noted, is poorer and unemployed at higher rates than both the white population and Latino populations. African Americans thus constitute a part of the human ecology in this study.

There were a multitude of pine straw dealers in the study area; most are considered small enterprises with less than nine employees on their payroll. However, the difference was noteworthy in terms of numbers of bales of straw bought/sold per year. Landowners generally owned in the hundreds of acres, but had different management styles and desires for their land. There was variation among owners in terms of their sophistication and understanding of the market. Three pine straw dealers were identified through a list from the Georgia Forestry Commission; the fourth was identified through a local key informant.

Seven government employees were contacted and interviewed for this study. In addition, the community organization played a role in identifying key informants. Key informants were then used to identify participants for this study; snowball sampling was also used. Approximately half of the harvester sample was derived through personal contacts and relatives of harvesters. A portion of the harvester interviews (a total of 7) were "cold" contacts: as I drove throughout the study area, I would often see cars, trucks and vans parked at the edge of pine stands where I would stop and introduce myself and the study. This was done in an effort to interview harvesters representative of the entire population of harvesters. That is to say that harvesters were not all identified through

brokers, forest labor contractors or landowners. Three other harvesters introduced themselves to me at a community function after hearing about my project and still another harvester called the Spanish-language radio station that allowed me air time to discuss the study. Once interviews were conducted, a smaller number of informants were contacted for follow-up and more in-depth interviews. The majority of interviews took place on site – on pine plantations. One landowner interview was conducted over the phone and one dealer interview was initiated through fax and completed with a follow-up phone call. The majority of harvester interviews were conducted in Spanish.

I also followed up with the community organization to check for representativeness in my sample and they concurred that my sample seemed to be representative of the pine straw harvester population as they knew it to be: mostly male, mostly undocumented, mostly new to the industry, mostly with a background in harvesting agricultural crops.

Each semi-structured interview lasted approximately a half-hour. Follow-up interviews lasted about an hour. Several days were spent observing harvesters at work in the field. I also toured tracts and facilities. Because some respondents regarded me somewhat suspiciously, none of the interviews were tape-recorded. I took notes by hand, transcribing them after leaving the field site. It was an interesting time to be examining this particular industry, with these particular actors. Insider/outsider status was very much in my mind as I navigated the field, moving between actors of different ethnicities

with different levels of education. My insider status amongst harvesters and forest labor contractors allowed me somewhat easy access to the community; a common language and ethnicity helped respondents feel more at ease with me. As a co-ethnic, I was more attuned to the sensitivities required to ask certain questions. However, explaining what a dissertation was and what the expected outcome of the research was proved a difficult task. So, although my position as a co-ethnic granted me insider status with these actors, my educational background compromised my status. More than insider and outsider, I felt the "betweenness" alluded to by Chacko (2004) while conducting fieldwork in her native India. My status as an educated co-ethnic gave the respondents access to information such as how to find an attorney, how far it is to Chiapas among other questions. Among Anglo landowners, dealers and government employees, all of whom were male, my positionality, again, was somewhere in between. I draw on Maher and Tetreault's (1996) definition of positionality to examine my own in this particular situation. How did my gender, race, socioeconomic status or ethnicity affect the types of responses I received or even whether or not I would be granted interviews? I had both insider and outsider status. My ethnicity was essentially erased, perhaps because I wore better clothes than the harvesters, spoke English better, was educated or because I am a U.S. citizen by birth – I am not sure which, but it was erased to the point that each of these actors spoke freely and sometimes crassly about harvesters, calling them "wetbacks" who "carried diseases, different diseases than you and me" and were "dirty" (Personal Interviews April 2006, May 2006). I also had insider status because I attended a well-known university in the Southeast with a well-known school of forestry. One

landowner had even attended Auburn. As a female researcher asking questions with a sociological spin to them, insider status based on attending Auburn did not carry me very far. I was treated in a somewhat patronizing fashion by some based on the questions I would ask. And still others treated me in a paternal fashion. For example, a dealer once told me I could ask my questions after he treated me to lunch at the best restaurant in town, where we dined with his extended family.

Midterm elections meant that immigration policy was a hot topic, as were marches and rallies and worker boycotts. Interviews and conversations invariably turned toward this topic, with many workers admitting they were afraid to not show up for work on "designated" boycott days and brokers and landowners all chiming in with their ideas for guest worker programs and immigration reform. It was not always easy to find workers or to arrange interviews because workers felt they were now on the radar and feared that I might work for the immigration services. I had the opportunity to tour many pine straw tracts with a local government employee. Unfortunately, riding around in a white government vehicle further raised suspicions among some workers. Landowners and brokers almost always asked whether I worked for the government or a newspaper before we began our interviews. Hence, arranging interviews was much more of a challenge than what I had hoped. The study concluded in the summer of 2006.

Case Study

Often, a primary focus of political ecology is on actors, thus, I will now briefly describe actors in the pine straw industry. I will follow this with accounts of their interaction and how they are connected to change in the physical and social landscape.

Dealers

Pine straw brokers or dealers are a key link in the pine straw commodity chain. There is a marked difference in numbers of bales harvested per year between larger and smaller dealers. Those that sell by the tractor trailer deal in millions of bales per year, while smaller operations may deal in thousands or tens of thousands of bales per year. The dealers interviewed for this study came into the industry in different ways. For example, one dealer baled his own straw to spread around his yard and garden. He had so much left over that he began selling it and eventually had agreements with people as far away as Atlanta – he would deliver and spread the straw to a number of different homes. And this is how he grew his business. Others came into the business less organically, that is, they heard of others doing it and decided to give it a try. Access to straw, transportation and a market are required to start up. Of course, labor is a necessary input.

According to some brokers, there are many brokers that crop up in one season and are gone the next. When asked why there was so much attrition, one dealer put it bluntly:

> They are either stealing the straw (from harvesters) or they don't have anywhere to unload it (Personal interview March 2006).

According to this dealer, successful brokers pay their landowners and pay their harvesters. But an outlet for your straw is also a crucial component. Thus access to land, capital and a market are important, but finding and keeping that market is only possible through access to information. Successful dealers need to be able to deal with executives in major retail outlets like Lowe's or Home Depot. They need to be able to guarantee a steady supply of product of a certain quality or they lose the contract. In other words,

these need to be businessmen, not just some local person who happens to own some trees or happens to know someone who will harvest straw cheaply.

There are numerous scenarios through which they obtain straw to sell on the market. They may enter into agreements with landowners to acquire straw and pay by the bale or by the acre. A by-the-bale agreement generally favors the landowner while a by-the-acre agreement tends to work to the dealers' advantage. For example, one dealer has been tending a particular plot and has seen yield increases over the years and he feels certain that he can harvest up to 300 bales per acre this season. In this case, because he is in a by-the-bale contract with the landowner, the more he bales, the more he has to pay the landowner. An extension agent I interviewed has found that female landowners, especially widows, tend to enter into by-the-acre agreements in contracts that cover a number of years. These contracts specify that the dealers will apply all the necessary herbicide to sites and usually stipulate that if the landowner thins the trees the contract is void. Dealers generally get their money out of these particular sites in the first couple of years and tend to let the site go soon after. Many landowners argue that herbicide has not been applied and they end up with very little straw yield and worthless timber after the contract ends. Many widows are simply looking for enough cash to pay taxes on their land. Dealers are interested only in straw. They do not bear the cost of declining softwood prices or diseased tree volume. Dealers sell straw through a variety of situations; larger establishments sell straw in bulk to Lowe's or Home Depot while smaller dealers may sell to roadside fruit stands or individual landscapers.

Landowners

The Conservation Reserve Program encouraged many landowners to take land out of farming and put it into forestry. All but two of the landowners interviewed had land admitted to the CRP program in the mid 1980s. None of them re-signed when their initial contract was up. Implemented as a way to get highly erodible soils out of farm production, farmers were paid to plant grass or trees on the farmland instead. A number of farmers in the study area signed up. Most of the landowners interviewed hypothesize that this is what has caused timber prices to decline.

As softwood timber prices continue to decline, landowners throughout the Southeast are looking for ways to remain profitable and many are turning to the selling of pine straw. Landowners interested in pine straw can get information from their local extension office. There is even a push to manage land for straw exclusively (i.e. no harvest of trees). This further reinforces the idea that perhaps landowners should discontinue harvesting of timber or at least hold off as long as they can. The diminishing marginal return has not been looked at closely as some plots have been in pine straw production for a short amount of time and the idea of managing exclusively for straw is a relatively new one.

Landowners in Counties A and B are relatively wealthy, with most of the landowners I interviewed owning hundreds or thousands of acres of land. Ownership patterns for the state of Georgia, collectively, show that 38% of timber tracts are of 50 acres or less and 23% of timber tracts are of 500 acres or more (Kennealy et al. 2006). One landowner presides over a local bank and his land has been in his family as long as he could remember. He recalled a time when it was parceled out and rented to black

share croppers. Another landowner had worked hard to acquire his 90 or so acres. And still another had diversified his hundreds of acres into growing pecans, farming and lately growing pine for straw. All but one landowner were born and raised in or around the study area. Some of the land has been in the same family for three generations. One elderly landowner recalls when his land was used for sharecropping and now states proudly that it is all planted in pine. All the landowners interviewed were white males. One landowner was also a straw dealer.

Landowners are often approached by random harvesters for their permission to harvest straw. If landowners are not under contract with wholesalers, they may allow harvesters to enter their land, rake straw and then be compensated for the straw.

Landowners can earn up to $100,000 raking straw in the intervening years between the first thinning on their land and second thinning or clear-cut (based on pine straw dealer interview, March, 2006). Landowners, according to this particular dealer prefer to be paid by the bale and in cash in order to avoid paying taxes on this income. They enter into contractual agreements with pine straw dealers for access to their land: five year contracts are common but 10 year contracts are the most common. Most sites can yield up to 100 bales per acre; landowners can make 50¢ to 65¢ per bale.

Harvesters/Forest Labor Contractors

Harvesters interviewed include a combination of harvesters and forest labor contractors[1]. Although I am lumping harvesters and forest labor contractors into the same group, there are stark differences between these two groups and I will elaborate below. There seems to be a carry-over from the way labor is organized within the agricultural sector in the

[1] Also referred to as crew boss or crew leader

region. A pine straw dealer often employs or works through a forest labor contractor. The dealer issues this person a 1099 (employee income tax withholding form) and the forest labor contractor is responsible for paying his own taxes as a subcontracted employee. He is also responsible for organizing crews to harvest straw at the discretion of the dealer and landowner. These arrangements lead to some confusion as to how harvesters view their relationship with labor contractors. The prevailing sentiment among many pine straw dealers was that they did not consider themselves formal employers since they did not tax harvesters' income the way it is in a formal arrangement. The same holds true for some crew bosses or labor contractors who did not consider themselves crew bosses because they did not issue their workers 1099s or tax their income. Some workers talked of being duped into thinking their income was being taxed. When some of these workers filed their income tax returns, they found that they had not, in fact, paid taxes. The workers' "tax" money went into the pockets of the crew boss. Some forest labor contractors began as harvesters. All had legal status in the U.S. The distinction between them and harvesters was obvious – they owned cars and trucks, dressed better, had better English skills. All had been in the community for more than 10 years.

As more and more Latinos enter the workforce as pine straw harvesters, there has been a decline in the amount paid per bale of straw. Workers are paid between 70¢ and 90¢ per bale of straw harvested. This is down from $1 or more in previous years. The price paid per bale also depends on whether workers leave their bales on site or carry them and load them into a trailer. Raking or harvesting is grueling work, but loading is equally tough. Workers inhale large amounts of dust and mold from the straw packs

while loading. Most workers say they are now used to the dust and almost never wear masks. Others prefer not to load the bales.

Only eight females were interviewed for this study. They were able to compete with males and comprised a small portion of this workforce. Females, especially those that are undocumented, have found that working in the pine straw industry provides them with better income than other alternatives, such as working in restaurants or produce packing sheds. Many of these females have migrated alone and are supporting young children they have left behind in Mexico. In addition, according to some of the subjects interviewed, many wives and children supplement the income of men. Children are able to rake and clean the straw while the men bale it, especially when they are out of school in the summertime. Two female labor contractors were part of this study. They were as successful as their male counterparts.

As mentioned above, forest labor contractors are sometimes employed directly by the pine straw dealer and it is they who hire crews on a subcontracted basis. These intermediaries also happen to be Latino and the result is often co-ethnic exploitation. One of my original research questions was whether or not the knowledge gained harvesting straw resulted in a move up the commodity chain. The answer to that question is yes, in cases of Latinos with legal status to live and work in the U.S. The majority of harvesters interviewed, however, have no aspirations to own land or to find other employment. They are earning subsistence-level wages to support themselves in the U.S. and attempt to support families abroad. Success in this industry, for Latinos, is heavily dependent upon citizenship status and command of the English language. While pay

rates have declined, according to harvesters, dealers insist that the price paid per bale has held steady, and this may be true. The forest labor contractor, the intermediary who helps arrange crews of harvesters for dealers, also gets a cut. And as it is he (or she) who employs the harvester whether formally or informally, it is he or she who pays them. The contractor also has ways of creating rents through providing housing, transportation, equipment and sometimes even weekend entertainment to their harvesters. Some contractors are even considered *coyotes* or transporters of illegal immigrants, who rent out these workers until their passage has been paid - which may take as long as six years. Forest labor contractors are the primary point of contact between dealers and harvesters. Because they enter into agreements with dealers, they negotiate the terms for pay and in turn pay harvesters. Forest labor contractors are paid $1 to $1.20 per bale. Harvesters earn 80¢ to 90¢ per bale. They earn the lesser amount when straw is baled and left in the forest to be collected by the dealer; the larger amount when the straw is baled and loaded onto trailers for transport. Harvesters are engaged in year round work with peak seasons in spring and fall.

Power Politics in Southeast Georgia

The framework for assessing the pine straw industry in this particular context is centered on four themes. Each of these themes emerges as critical elements through which to examine relationships between pine straw dealers, forest landowners, harvesters and labor contractors, land and the native labor force. We must take into account the complexities of political, social, economic and ecological interactions.

When employing a political ecology framework, it is important to consider the ways one actor seeks to exert power over another and in what ways one actor attempts to control the environment of another. Do these power relations have an effect on the physical environment? Land has always been a source of power in the South and landowners control the discourse. They have been powerful enough to make the federal government look the other way when it comes to using undocumented workers to accumulate wealth. In 1998, Georgia farmers were outraged when INS raided their farms while the crop was still in the field. They argued that federal programs for legally employing migrant workers were too costly; both in terms of what they would be required to pay workers and in administrative costs (see Apple 1998; Stern 1998; Thompson 1998). The agricultural lobby in Washington persuaded INS to leave them and their workers alone and they gained a reprieve from immigration raids. This would seem to be a welcome thing for undocumented workers, but I argue that it adds to their vulnerability. Farmers and landowners are often perceived as more powerful than the government. Perhaps this would be a nonissue, however, if farmers and forest landowners employed a native workforce drawn from the large numbers of unemployed African-Americans within the study area. In spite of the difficulties faced by employing a nonnative, often undocumented workforce, forest landowners and farmers display a marked preference toward Latinos as opposed to African-Americans.

Due to the increasing visibility of Latinos in the area, perhaps brought about by 2006 midterm election activities and the various rallies and boycotts, the forest sector has not been successful in keeping immigration officials away permanently.

Latinos in the study area are extremely vulnerable, not only on the job, but in their daily lives in general. During the midterm election year of 2006, Georgia passed legislation cracking down on illegal immigration that will be phased in through 2008. Medical care and driver licenses, among other things, will be harder for undocumented immigrants to acquire. This legislation was being closely monitored by the Latino community organization in the area and when it passed, the director, with tears in her eyes, had this to say:

> I feel like all the work I've done over the past twenty years has been erased. We have worked so hard to make Latinos in the community 'follow their rules'; we take them to local clinics for health care and discourage them for using emergency rooms. We try to educate the community on STDs and AIDS. We have a food pantry. We do so much work so that they won't become a burden. And we are even told by the government we are doing things right because we get grants for a lot of our projects. And then, just like that, they are taking us back into the past, when we used to hide and be afraid to be here.

During the course of this research, with midterm elections and immigration policy the center of debate, the area was inundated with immigration raids. Families were torn apart as fathers and husbands were deported and forced to leave behind wives and U.S.-born children. Undocumented Latinos, whether farm or forest workers, took to hiding in the forests for days and even weeks at a time to avoid detection. As a migrant advocacy worker put it: "These forests that we speak of as a commodity have become a hiding ground for those who sought their fortunes in them." She further told of her organization

making “drops” at the edge of the forests: bags of food, diapers, water and formula. The area was hit hard, especially after the conclusion of this study. One poultry processing plant in the area reports having 600 job vacancies as a result of the raids (Interview, September 12, 2006). Of course it is probable that a large number of those deported will find their way back to the area and perhaps seamlessly pick up where they left off. However, with approval of the building of a wall along the U.S.-Mexican border and increased patrol, it is likely to become increasingly difficult and thus, more costly for undocumented Latinos to cross the border. These workers, mostly undocumented, but many of whom have lived in the area for decades, are now more vulnerable and marginal. And these attributes make them attractive to the pine straw industry. So while they contribute greatly to the local economy through informal employment, they clearly exist on the fringes of society. The legislation passed in Georgia sends a clear message: undocumented workers are welcome to work in the woods, on farms or factories, as long as they make no demands from the system.

The path of this labor force is strikingly similar to that of African-American labor in naval stores in the South. Outland (2004) describes the history of labor in turpentine in North Carolina. It progressed from using slave labor to forced African-American labor by way of debt peonage. He further notes the physical and social isolation brought about by working deep within the forests resulting in a grueling life for ‘turpentiners’ and their families.

Thus, the history of forest labor in the South is, in part, one of endemic racism, and of keeping labor poor and dependent. Civil rights and welfare programs have created

some space for black independence. Migrant labor provides both cheap labor and a means for keeping the African-American population marginal to the economic life of the area. But this also means that there is a history of displacing one marginalized population with another. Evidence from Casanova (2003) supports the fact that employers cycle through workers – as particular groups begin to demand better working conditions, they are displaced by workers with little to no experience in that particular industry or working in the U.S.

Landowners and dealers readily admit that they are heavily dependent on the immigrant labor force and that this industry would not likely survive without them. So for them, immigration raids and anti-immigrant state legislation are potentially costly. Dealers' costs, especially transportation, have nearly doubled within the past couple of years. Labor costs offer them the most flexibility and wages for harvesters have remained at the same level as long as most harvesters can remember. In real terms, this means their wages have actually declined while pine straw contributes $60 million to Georgia's economy.

Dealers interviewed repeatedly stated, "we need these people" and "Washington (D.C.) doesn't understand how hard it is to find workers like these." One dealer proudly displayed a photograph of President Bush on his office wall but expressed displeasure at the direction the country was moving in terms of immigration. As mentioned earlier, dealers exhibited a pronounced preference for Latino workers, especially newly arrived workers. Many of the new arrivals were essentially indentured servants: debt peonage is a common occurrence for workers in this industry – a harvester is tied to a particular

forest labor contractor until his debts, which may include illegal passage into the U.S., are paid off. Those still indebted work where they are told to work and as hard as necessary to get out of debt. This perhaps leads to increased productivity. It also results in labor bidding against itself, hence the relatively stagnant wages paid to harvesters. I must stress again that dealers are almost never the direct employers of harvesters. Dealers typically work with a forest labor contractor to arrange for harvesters. All forest labor contractors interviewed for this study were Latinos but were all authorized to live and work in the U.S. In fact, most dealers employ fewer than nine people, in order to circumvent labor laws requiring them to pay overtime and are thus considered very small enterprises. Several stated quite truthfully that they did not employ "illegals." And just as many felt that the problem with labor in this industry had more to do with the forest labor contractors and their unethical practices, including the aforementioned instances of debt peonage, and running a 'company store' type operation whereby harvesters owe labor contractors money for rent, transportation and equipment. Several dealers offered alternatives to the current practices and immigration policy. "Let's give them all a worker I.D. card at the border" so that they can work legally in the U.S.; "We should barcode them" in order to keep track of them while they are in the country (Interviews, October 2005, March 2006). When the guest worker program already in place (H2-B) was mentioned as an alternative, they all felt that it was too costly and cumbersome and most reiterated that they did not employ these people anyway. Further, they scoffed at the idea of using native, African-American labor instead of undocumented harvesters. Ecological changes are mirrored by changes and continuities in the labor force. Slaves

once toiled in cotton fields that have since been replaced by crops of produce and today these fields are more likely to be planted in slash, longleaf and loblolly pine. Very few blacks work in the fields anymore. According to many pine straw harvesters, Hispanic migrants and immigrants first worked alongside and then replaced the local labor force in the fields and forests in the two-county study area. The black population far outnumbers the Latino population and, as noted previously, is fairly poor. The fact that there is not equitable access to these jobs is problematic at the community level. There is stratification within the commodity chain and this permeates throughout the study community, where one ethnic group is favored over another as labor.

Emery et al. (2006) and Lynch and McLain (2003) suggest opportunities for native workers (Anglos, African-Americans) present themselves beyond the manual labor of forest and field. Native workers are reluctant to move into or remain in occupations that are characterized by decreasing income (occurring perhaps due to Latino labor bidding against itself). Further, they are unwilling to accept informal employment. Throughout this study, I met only one black harvester, although I was told that there were many blacks harvesting straw further south. One dealer interviewed stated that he got into the business after a black man approached him about harvesting the straw on his land. When he inquired as to what the man planned to do with the straw and learned that he was selling to golf courses on the Georgia coast, he decided he could sell it himself. I met the black harvester under awkward circumstances: the dealer was accusing him of stealing straw.

It was evident throughout the research, in interviews with landowners and dealers that the preferred labor force was a Latino labor force. Dealers stated that they would give African-Americans a chance, if only they *wanted* to work. The prevailing sentiment was that blacks were on some type of public assistance and that they all received a "check" from the government. Thus, they morally justify using cheap, undocumented labor over local labor with claims that blacks do not want to work and are on welfare. When compared with a self-disposing workforce that is competing against itself, thus driving wages down, the native workforce does not stand a chance in this industry. Further, evidence from previous research (Casanova and McDaniel 2006) demonstrates that the immigrant/migrant Latino work force has raised the production to a point that employers will never be able to go back to domestic labor, either white or black and this helps to further justify their use of this labor force. Homma's (1996) assertion that survival of this industry depends on increased productivity while keeping labor costs down (in place of technology) seems to be on target.

The power politics in the region show that actors are sometimes powerful and at other times powerless. Landowners struggle with proposed and passed legislation they feel will ultimately harm their profit margin and yet they benefit from governmental programs and incentives that prompted them into this industry to begin with. Because access is granted at their whim (and pursuit of profit), landowners are in a position to allow or disallow harvesting on their land.

As the physical landscape has changed from one of row crops to pine plantations, labor exploitation, even from co-ethnics, continues to be quite common. Together with landowners, pine straw dealers have divorced themselves from the labor process. In a

figurative sense, no one works for them. Forestry firms with less than nine employees are exempt from both overtime and minimum wage requirements, which means that there is no government agency responsible for the regulation of their pay (United States Department of Labor (DOL) Wage and Hour Division 2006). The states all defer to the federal authorities and have no enforcement or regulatory powers over wages and the like, and are subject to whatever the federal guidelines are. DOL Wage and Hour Division basically said that because these small forestry companies (dealers) are exempt, it is likely that no one (maybe the IRS, but they don't enforce fair labor standards) has authority over them. It appears that neither the landowner nor the dealer is responsible for any kind of oversight of workers. Rather, the forest labor contractor is legally responsible as this is considered subcontracting. Consequently, having no employees works in favor of dealers and landowners in a variety of ways: no paperwork, no benefits to pay, no legal responsibility for harvesters, and dealers and landowners can use the expenses associated with paying forest labor contractors and harvester as tax deductions.

Power – whether the impersonal power of the market or the blatant power of those who have a legal right to live and work in this country – has shaped this industry. Actors – whether white and landed or Latino and landless – have a niche to fill in this industry. A number of harvesters interviewed aspired to have more control over access and attributed their lack of control to limited English skills and lack of familiarity with landowners in the area. Although separated by cultural and socioeconomic barriers, harvesters have indicated that those with community connections and more important, with a good command of English are able to arrange access to straw with landowners. However, the overwhelming majority of harvesters do not speak English and are

relatively isolated from the larger community, hence, they are granted access through a forest labor contractor. However, there is much room for exploitation and abuse, and this leads to stratification, even within the co-ethnic community.

Further, informal employment arrangements work to the benefit of those at the top of the pine straw hierarchy (i.e., the dealer and labor contractor). Dealers and landowners often find ways to deduct the expenses associated with subcontracted labor on their taxes, even when they readily admit that said labor is undocumented. Harvesters are responsible for paying their own income taxes, but rarely do. We, as taxpayers, are subsidizing brokers and landowners as well as harvesters, some of whom do not pay taxes. However, in recent state legislation, this burden is placed squarely on the shoulders of undocumented workers. A recent development, noted previously, with implications for the pine straw industry is State Senate Bill 529, the Georgia Security and Immigration Compliance Act, which seeks to cut off illegal immigrants from medical care and schooling. It is also aimed at sanctioning employers for hiring undocumented workers. This legislation will have detrimental effects in this community over the next few years. It is remarkable that dealers and landowners often take an anti-immigrant stance while at the same time admitting that the pine straw industry would not exist without immigrant labor.

Conclusion

A political ecology framework has been employed to highlight relationships between actors in the pine straw industry. I have shown that the changing physical landscape, from one dominated by agricultural production to one focused on forest production, has

been fueled by federal policies, commodification of a natural resource and a pliable workforce. Further, I have demonstrated that ecological changes are often precipitated by social and political influences. An examination of a local system of production reveals ties to global influence and its place in the state's economy.

Ecological Changes are Social and Political

The commodification of pine straw has been a windfall for many in the region. Primary production jobs that have been created in rural areas in the recent past, such as the harvesting of pine straw, have moved toward informal, contingent employment and Latino immigrants, formerly employed in agriculture have willingly moved into this sector. In essence, labor practices from agriculture, are being recreated in forestry. Government programs such as the CRP reward farmers for taking cropland out of production and planting grasses or trees. Because there were many takers initially, pine plantations now outnumber farms. Following termination of CRP contracts, these forest landowners now find that pine straw provides a steady income in the intervening years between planting and harvest. Cheap undocumented labor allows landowners, forest labor contractors and dealers to squeeze out a profit even in times of increasing transportation costs. A steady stream of Latino immigrants ensures that labor remains cheap. Crackdowns and threats of immigration enforcement additionally ensure that this labor force is not only cheap but also vulnerable and therefore easily exploitable. Policies on the employment of undocumented workers prove to be a disincentive to formalize any work associated with the harvesting of pine straw.

There is an ecological impact from harvesting pine straw that research has only begun to address. I have seen a number of sites that have been pushed too hard into

straw production. On sites that will be managed primarily for straw production, trees are planted closer together. Because some landowners and straw companies believe more trees yield more straw, they are reluctant to thin the trees. The result is sometimes devastating, as too many trees on a site lead to disease and insect problems. What this means for the landowner is that, in the end, their timber becomes less and less valuable.

Examining These Changes Unveils Social Relations of Production and Changes

Native workers demand job stability and benefits, neither of which is offered with the informal nature of pine straw harvesting. Further, a history of racism against the local African-American population reinforces the preference for Latino harvesters.

In essence, forest landowners benefit from cheap, disposable labor and it is questionable whether this industry would exist without the immigrants. Landowners and brokers alike have been able to squeeze more profit by cutting down labor costs, their only real variable cost, while removing themselves from liability and immigration risks. Stereotypes of local black labor, long held by many landowners and brokers seemingly ring true when compared with the Latino immigrants willing to work long hours without demanding formal employment and the benefits that go along with that.

The Mexican immigrants interviewed in this study preferred forest work to farm work. It is year round employment with much less scrutiny from crew bosses. And as several harvesters noted, they get to "work in the shade." Besides shade, the trees also offer workers lower visibility from immigration officials, a significant benefit when over 90% of this workforce is undocumented. By exploring the dynamics of this industry in terms of actors, the economic impact of the pine straw industry is, without question, a

positive one for forest landowners, dealers and contractors (Boatright and McKissick 2006). Harvesters are often hard-pressed to say that they are in a bad situation as many are content simply to have employment in the U.S. Whether through force or consent, they continue to saturate the industry and their presence is worth millions of dollars to the Georgia pine straw industry annually.

CHAPTER 3

RAKING IT IN: THE COMMODIFICATION OF PINE STRAW IN THE SOUTHEAST

Non-timber forest products (NTFP) have always held cultural and economic significance in the U.S. Early European settlers noted Native American use of plant matter to make utensils, bedding and shelter (Emery and O'Halek 2001). For aboriginal peoples of the U.S., commodification of NTFPs is not a new occurrence; they have traded medicinals and other forest fodder for thousands of years (Turner and Cocksedge 2001). Many common products in the market today were derived from native peoples and include wild rice, pecans, maple syrup and a number of medicinal products. NTFPs have evolved from trading for sustenance to trading and sustaining the product for commercial gain. No longer considered minor forest products, some NTFPs are often more valuable than timber (Alexander and McLain 2001).

In the Southeast, pine straw is a non-timber forest product that has recently been recognized as a valuable commodity contributing millions of dollars into the economies of North Carolina, Florida and Georgia, creating thousands of year-round jobs. The pine straw industry employs thousands of harvesters and provides income for landowners waiting to harvest their timber. The pine straw industry has provided an economic boon,

especially to depressed rural economies. Some of the income earned by landowners and harvesters is spent at local businesses and in local taxes. As an NTFP, pine straw joins the ranks of mushrooms, floral greens, wild edibles and medicinals as significant income-generating products gathered from forests across the U.S.

Harvesting NTFPs requires access to them, and access to NTFPs is invariably tied to land tenure and ownership. Fifty-seven percent of all forest land in the U.S. is privately owned. In the western U.S., where most research on NTFPs has taken place, most NTFP production takes place on public lands. There is a marked difference between pine straw produced in the Southeast and these other NTFPs, as pine straw is harvested from plantation pine forests on privately owned land. Public land is dominant in the West and privately owned land is more common in the East. This is largely a result of settlement patterns in the U.S.; the East was the first to be settled and land in the West was owned and maintained by the federal government prior to settlement (Butler and Leatherberry 2004). Research related to NTFPs in the U.S. is often focused on three main points: access to the resource, commercialization of the resource (and how this relates to labor practices) and sustainability or conservation of the resource (Chamberlain 2006; Chamberlain, Cunningham and Nasi 2004; Emery 2001; Pilz, Molina and Amaranthus 2001). These issues are often framed in terms of social and environmental justice with the focus placed on NTFP harvesters.

This article situates pine straw in the larger body of the domestic NTFP literature by examining the harvesting of pine straw in the context of private property. I evaluate access, commercialization and conservation as they relate to pine straw through the presentation of a case study. The article is divided into five main parts. It begins with a

review of research on NTFPs. I will then move to an introduction of the pine straw industry, detailing what pine straw is, its use and where it is acquired. This is followed by a detailed account of the methods employed in the case study. I will then detail findings through a review of pertinent studies on access, commercialization and sustainability of NTFPs and how they compare with the pine straw case study. The case study will be followed by a section of discussion and concluding thoughts. This paper will expand the domestic NTFP literature by highlighting a case where the product is gathered from private land, a departure from the more frequent NTFP setting of public or Forest Service lands.

Scholarship on Non-timber Forest Products

The international literature on NTFPs provides a rich account of the commercialization of a number of products as a form of economic development in lesser-developed countries (e.g., Brazil nuts, rubber, hearts of palm). The commodification and cultivation of NTFPs are often touted as having the potential to conserve forests while helping rural people meet their livelihood needs (Wiersum 1998). Often with the encouragement and assistance of NGOs, communities are taking tree nuts, sap, and wild edibles and converting them to income. Whether as a product of natural tree stands or plantations, NTFPs have been the focus of research and policies for quite some time in the international arena (Coomes, Barham and Takasaki 2004; Taylor, Mateke and Butterworth 1998; Stoian 2005; Tewari 1999; Tomich 1998; Wiersum 1998).

Special forest products and forest botanicals, as NTFPs are often called, account for millions of dollars of trade and domestic sales. In the Pacific Northwest, the harvesting of non-timber forest products generates hundreds of millions of dollars

annually (Ballard and Huntsinger 2006). The international literature stresses that focus should be taken off of the product and should begin with "the people who use the forest, examining different needs and the functions forests serve for them" (Falconer 1995). U.S. researchers of NTFPs are demonstrating a move toward this aim. For example, Emery (1998) describes NTFP harvest and use in the upper peninsula of Michigan and how this activity is a source of livelihood and family togetherness; Ballard and Huntsinger (2006) discuss salal, a floral green, harvested in the Pacific Northwest and harvester ecological knowledge. Emery, Ginger and Chamberlain (2006) recently completed a study of the harvesting of galax, another floral green, in western North Carolina in which the focus was also related to labor and sustainability of the resource. Anderson, Blahna and Chavez (2000) examine the cultural and economic significance of NTFP harvest amongst Korean and Japanese communities. Each of these studies describes the commercialization of NTFPs and the effect on sustainability and livelihoods. Further, what most of these studies holds in common is that the harvesting takes place on federal or public lands, Forest Service land in particular. Another issue they hold in common is that they address some socioeconomic aspects of NTFP harvesting.

With increasing frequency, researchers are noting the presence of Latinos and other immigrants in the commercial harvest of NTFPs (Ballard and Huntsinger 2006; Emery et al. 2006; Hamilton 2004; Hansis 1996, 1998, 2002). Hansis (1998) highlights the influence of non-Anglo ethnic groups, including Latinos, and conflicts over access to the resource. A small, but important body of literature has focused on NTFPs in the Southeast and highlights a significant regional difference: the increasing participation of

Latinos in the harvesting of NTFPs in the region. Emery et al. (2006) and Hamilton (2004) both note this fact in their research in North Carolina. My study will also contribute to this emerging body of literature.

Non-timber forest products in the Southeast are numerous: saw palmetto, honey, moss, galax, Christmas trees, ginseng, pine seeds and pine straw, to name a few. If broadly defined, NTFPs could include game such as deer and wild turkey and the value received from leasing out land for hunting purposes. Taken as a whole, these NTFPs also generate millions of dollars of revenue. Landowners in Georgia earned upwards of $60 million from pine straw production alone over the past year (Boatright and McKissick 2006). Most of the harvesting is done by Latinos.

The NTFP literature also reflects vast connections to global markets, particularly with medicinals, mushrooms and floral greens. Pine straw's distinguishing feature is its local market. Its bulkiness and low value compared to other NTFPs limits its commercialization over larger geographical areas.

Because public land is so prevalent in the West, it is therefore no surprise that public policy plays a large role in the regulation of access to NTFPs in the West. In the western U.S., access and permit schemes are largely governed by the Forest Service and even where there is privately owned land, they generally tend to follow the lead of the Forest Service (Ballard and Huntsinger 2006) in terms of access. Permitting schemes are intended to ensure the sustainability of the resource. Ballard and Huntsinger (2006) further detail that permits for salal vary in cost and length of access. Issuing permits, however, lends an air of legitimacy and formality to NTFP harvesting in this region. There is accountability. Hansis (1998) notes that permits issued from ranger districts on

national forests for harvesting bear grass, berries and mushrooms contain personal information including vehicle license plate numbers and birth dates. Rangers often confiscate berries or mushrooms from non-permitted harvesters. Permits also describe whether harvesting is for personal or commercial use.

Permit schemes are an attempt to control access and sustainability of the resource. The permit schemes also serve as effective mechanisms in assessing the size and vitality of the industry. Access is thus based on research, experience and management by the federal government to achieve particular goals. Permit schemes on private land, particularly in the southeastern U.S., are less relevant.

Ballard and Huntsinger (2006) found that insecurity of tenure influences NTFP harvesting practices: harvesters will harvest with discretion when they have fuller, longer-term access to land. Harvesters will maximize their benefits over many periods, and will harvest in a sustainable way that increases the likelihood of a harvest the following period. Harvesters' behavior is dictated in part by the term structure of access to the land. If harvesters have short-term access to the land or if long-term access is uncertain, harvesters will try to maximize their benefits over the short/certain period, and will harvest without discretion.

Conservation and sustainability of the resource grow out of self-interest as noted by Ballard and Huntsinger (2006); you are more likely to harvest with care when you have long term access to the resource because this ultimately means more money in your pocket; not today, but over the long haul. One would assume that this type of harvesting would tend to have fewer negative impacts on the environment than indiscriminate harvesting that strips the land bare. Ballard and Huntsinger (2006) further examine the

boundaries of ‘local’ and ‘community’ in an attempt to gauge the inclusiveness of harvester ecological knowledge when harvesters are migrants or immigrants. Harvesters’ knowledge is crucial for developing sustainable forest management practices (Chamberlain, Hammet and Araman 2001).

The Southeast Pine Straw Industry

Pine straw is commonly used in landscaping as mulch and for aesthetic purposes throughout the United States, but it is particularly popular throughout the Southeast. Pine needles tend to interlock, holding neatly in place when spread. They will not float in water, like pine bark nuggets and other woodchips. These qualities have made pine straw very desirable to professional landscapers and pine straw can be seen in front yards, shopping strip-malls and golf courses throughout the region. It not only provides a way to trap moisture, but it also offers excellent protection from soil erosion on construction sites.

Pine straw is sold on the wholesale and retail levels, from super chain one-stop retailers to roadside vendors, providing forest landowners with an important source of income from pine plantations. Historically landowners’ income came from the harvest of timber when it matured. Unlike timber, pine straw harvesting can be a continuous process because as trees grow they shed some of their needles. The income from timber is derived from a one-time sale of the timber whereas pine straw contributes a continuous stream of income to landowners. Raking can begin as early as six years after planting and can continue from the initial thinning to harvest.

In the study area, pine straw is harvested mostly from slash (*Pinus elliotii*) and longleaf pine (*Pinus palustris*) with longleaf needles or straw being the most desirable.

Straw from loblolly (*Pinus taeda*) is also harvested, but fetches a much lower price than that harvested from other species. Consumers are looking for needles that are brighter in color and that take longer to decompose. Thus, there is a marked preference for longleaf pine straw, followed by slash.

As a commodity, pine straw has a local market, with the majority of sales occurring within a 500-mile radius of harvest sites due to transportation costs. Its bulkiness, relative to its price, limits the extent of its market. The farther it is trucked the higher the cost of transportation and the less price-competitive it becomes relative to other types of mulch or landscaping materials.

Because pine straw is often raked from the same tract as frequently as every year, harvesting is an activity that provides workers with predictable, albeit seasonal, employment. Work varies throughout the year with the heaviest harvesting taking place in early spring and early fall, when demand for straw from landscapers increases. The work takes place on privately owned pine plantations and crews consist of about 10 people. It is tedious work; workers must first rake pine needles into piles from which they pick out any woody debris. After this is accomplished, they begin the task of making bales. The straw is packed into homemade box balers and packed into a tight bale. Workers then secure bales with twine. The bales are later loaded onto open trailers and enclosed containers and hauled off to market.

Pine straw differs from other non-timber forest products in that it is not a plant species but rather a result of a natural biological process: the shedding of leaves (or in this case needles) from trees. This non-timber forest product is not itself cultivated. It is a true joint-production. Forest landowners cannot grow straw without the tree and vice

versa. Although the weather has a fair amount of influence on how much litter a tree will drop, landowners can control how much litter a tree can produce by spacing their trees properly and thinning to allow the tree to grow out rather than only up. In addition, pine straw is shifting from being a marginal good with marginal importance to the landowners to an important product in its own right as demand grows. A number of landowners in this study mentioned their desire to manage their land solely for straw and to never harvest their trees.

In this case study, pine straw is harvested primarily from privately owned land. There are other traits that characterize the contrast in landownership patterns between the two regions. For example, family forest owners in the South are more likely than forest landowners in other regions to use their land for timber production. Land owned and managed by the federal government, such as Forest Service land, has at its disposal a cadre of ecologists, foresters and biologists to guide its management. Family forest owners in the West are more likely to seek out management advice and have a written management plan than their counterparts in the South (Butler and Leatherberry 2004).

Methodology

The case study presented here is part of a larger study on the pine straw industry in a Georgia community. The study is focused on the socioeconomics of harvesting pine straw and the role that migrant and immigrant workers play in this industry. This is a study at the micro-level of an industry that exists in many parts of the Southeast and as far west as Arkansas, Texas and Missouri. Pine straw is a major commodity in North and South Carolina, Florida and Georgia. This is a case study, a snapshot in time of an industry in a particular geographic location. The study occurred in a two-county area of

Georgia. The particular study area was selected for a number of reasons. First, the two counties selected are among the top ten pine straw producing counties in the state of Georgia. As one key informant put it, "ninety-five percent of forest landowners in the area are harvesting their straw; the other five percent call me every day to figure out how to get into the business" (Interview, May 2006). To protect the anonymity of informants, the counties (when mentioned) will be called County A and County B. Both counties are heavily planted in either pines or agricultural crops, although occasional pecan orchards can be seen throughout the area.

The area was also selected because it is one with a settled Latino population. Although Latino migrants still transit through the area, coming and going with the seasons, there are significant numbers of Latinos who have settled in the area and call it home.

The approach of this study was qualitative in nature. Key informants were used to identify participants for this study. This was followed by snowball sampling. Ethnographic and qualitative research methods are often used to describe contemporary events or occurrences in depth as opposed to explaining why they occur (Yin 1994). Ethnography describes a culture or community and involves both listening and watching (Bernard 1995). These methods are used when the focus of a study is on the process of events as they unfold, within their particular context, rather than on an end result.

Participant observation allowed me to make the workers comfortable with my presence while at the same time documenting the nature of the work and conditions associated with packing pine straw. Participant observation and semi-structured interviews were undertaken with 46 pine straw harvesters, eight landowners and four

pine straw dealers for this study. Within each of these categories there existed differences and similarities: Latino harvesters included forest labor contractors who were, for the most part, documented Latinos and former harvesters. Harvesters interviewed were mostly male, but I interviewed eight women. All but six of the harvesters were undocumented. Of these six, four were forest labor contractors who were either U.S. citizens by birth (of Mexican origin), naturalized citizens, or permanent residents. None were originally from the area. Those that were American-born migrated from places such as Texas, Ohio or Florida. Others were naturalized citizens or became permanent residents during the Immigration Reform and Control Act of 1986, all of them from Mexico. Harvesters ranged in age from eighteen to 67 years; the majority had a maximum of six years of formal education.

There were numerous pine straw dealers in the study area; most were considered small enterprises with less than nine employees on their payroll. Differences were reflected in the number of bales of straw bought/sold per year. Three pine straw dealers were identified through a list from the Georgia Forestry Commission; the fourth was identified through a local key informant. Numerous government employees were contacted and interviewed for this study. Landowners generally owned hundreds of acres, but had different management styles and desires for their land. There was variation among owners in terms of their sophistication and understanding of the market.

Approximately half of the harvester sample was derived through personal contacts and through relatives of harvesters. A portion of the harvester interviews (a total of 7) were “cold” contacts: as I drove throughout the study area, I would often see cars, trucks and vans parked at the edge of pine stands and I would stop and introduce myself

and the study. Sometimes this approach worked and it was used to find harvesters who were representative of the entire population of harvesters. That is to say that harvesters were not all identified through brokers, forest labor contractors or landowners. Three other harvesters introduced themselves to me at a community function after hearing about my project and still another harvester called the Spanish-language radio station that had allowed me air time to discuss the study.

Once interviews were completed, a smaller number of informants were contacted for follow-up and more in-depth interviews (Appendix A; Appendix B). The majority of interviews took place on site – in pine plantations. One landowner interview was conducted over the phone and one dealer interview was initiated through fax and completed with a follow-up phone call. The majority of harvester interviews were conducted in Spanish. Each semi-structured interview lasted approximately 30 minutes. Follow-up interviews lasted about an hour. I spent several days observing harvesters in the field, and touring tracts and facilities. Because some respondents regarded me somewhat suspiciously, none of the interviews were tape-recorded. I took notes by hand, which were transcribed after leaving the field site. This fieldwork transpired over seven months between 2004 and 2006.

Findings

Before discussing the key areas of comparison between pine straw and other NTFPs, it is useful to look at land tenure arrangements and landowner demographics in the Southeast. As previously noted, the Southeast in general, and Georgia in particular, is dominated by privately-owned forest land. Two-thirds of the state of Georgia is privately-owned forest land and 93% of that is controlled by nonindustrial private landowners (Thompson 1998).

The National Woodland Owner Survey (Butler and Leatherberry 2004) provides more in-depth details of landowner demographics. Forest land in the Southeast is primarily privately-owned and the majority of those owners (67%) are families. A full 30% of these landowners are absentee and only 3% have written management plans (Butler and Leatherberry 2004).

Access

Access to NTFPs is invariably tied to land ownership. In the Southeast, private property rights reign supreme. There is no policy that addresses the harvesting of NTFPs on private land, and thus there is no policing of the industry and no effective way to gauge the magnitude of the industry. In the state of Georgia, there exists a "Certificate of Harvest." In personal communication with a state official, I was told that this certificate was intended to protect landowners from pine straw theft. He further noted that there was no mechanism in place to enforce the use of the certificate and he also did not know whether anyone had ever applied for one. Interviews with harvesters, landowners and pine straw dealers revealed that few had heard of the certificate and none had ever applied for one. Thus access to pine straw is a business agreement. Landowners will grant access to straw based on an agreed upon price with either a harvester or pine straw dealer. These relationships are usually based on contracts. Private property and personal profit are the true regulators of access. As will be discussed, commercialization of NTFPs and the informality of labor organization are both related to access.

Commercialization/Informal Sector

Homma (1996: 68) offers a perspective on the development of markets for NTFPs:

> *Markets control the existence (and disappearance) of extractive economies. The transformation of a natural resource into a useful or economic product is the first step towards an extractive economy. However, as the market expands, the forces which lead to its decline also increase.*

Homma further states that NTFPs generally follow a path from extractive activity to domestication to the introduction of its synthetic substitute as a result of larger markets and greater demand for the product. The pine straw industry is relatively new and is still in the extractive stage. Few large enterprises exist, most of the activity is marginal and is carried out by small enterprises. In spite of its informality and marginalization, the industry and the market demand for pine straw are growing. But as demand has grown, at least two manufacturers in the Southeast now produce a synthetic form of pine straw with claims that their product will reduce termite infestations and lower costs associated with replacing natural pine straw twice a year in landscaping (Snyder 2006). It is uncertain, however, how competitive these manufacturers will be when natural pine straw is abundant and its industry benefits from a decentralized and informal workforce.

Alexander, Weigand and Blatner (2002) note that most businesses in the NTFP sector are considered very small enterprises employing fewer than nine people. They further note that this characteristic lends itself well to the informal nature of this sector. That is to say those small enterprises involved in NTFP harvesting are often characterized by casual hiring and non-reported income due to their low visibility. In the

Southeast, in addition to low visibility, the private ownership of the resource renders the industry difficult to monitor and regulate. Private forest landowners, NTFP contractors and wholesalers regard the formalization of the sector and compliance as an additional cost that threatens their profit.

Most businesses engaged in NTFP harvesting are considered very small enterprises. They employ fewer than nine people (Alexander et al. 2002). This trend has remained relatively constant since the Census Bureau began keeping track of this category (Forest Nurseries and Gathering Forest Products) in 1998. Informality is an attribute the pine straw industry has in common with most other NTFP enterprises. In fact, NTFP enterprises are seriously underreported in the state of Georgia and could be classified simply as forest industries. There were numerous pine straw dealers in the study area and yet the state of Georgia as a whole only reports 26 establishments through the Census Bureau's County Business Patterns for 2004. The Georgia Forestry Commission lists 35 different pine straw producers throughout the state. Georgia's inability to accurately report the number of pine straw dealers is due to the informality of the industry and the ineffectiveness of its Certificate of Harvest system.

Through personal interviews, I discovered that many pine straw operations had origins in other states, such as North Carolina, where demand is high for quality straw. As detailed by one informant, an out-of-state pine straw dealer would solicit a harvester or forest labor contractor for a trailer load of straw and the harvester would arrange with landowners to harvest. After loading straw into the dealer's trailer, harvesters report that the trailer would be taken away in the night without payment, leaving them in a precarious position with landowners. Further, many dealers revealed that harvesters and

forest labor contractors with enough experience often attempt to start their own firm, but it takes more than first hand knowledge of harvesting to be successful - it requires business sense and connections, thus many of these companies fold within the first year.

The commercialization of this new NTFP has given many forest landowners and pine straw dealers income beyond what they could earn on timber. It has also created and perpetuated a socially and economically marginalized population of workers. As previously noted, the majority of pine straw harvesters are employed on a subcontract basis and are paid a piece rate. The majority of workers are undocumented Latinos, mostly hailing from Mexico. Love and Jones (2001) attribute the increasing presence of immigrants in NTFP harvesting to the commercialization and growing markets for particular NTFPs. An increase in demand requires a willing and able work force to meet this demand and immigrants often fit this requirement. Pine straw seems to have taken a similar path: several landowners and dealers stated that in the past they had harvested their own straw for sale locally or for personal use. When demand increased, they turned to Latino harvesters.

In terms of labor, Homma (1996: 80) points out that...

> *With the exception of the logging sector, the extraction of forest products can be characterised as being labour intensive, and so survival depends on the existence of marginal or low-cost labour. Labour-intensive activities that do not evolve technologically, either increasing the productivity of land and labour or processing of the product, have difficulty surviving when labour costs increase in real terms.*

Maintaining pine straw harvesting as an informal activity thus ensures the survival of the industry. Often, jobs in the informal sector are the only ones open to undocumented workers. Further, pine straw dealers work through intermediaries or forest labor contractors to procure labor. This forest labor contractor is usually a Latino who has access to immigrant social networks. The use of this intermediary has led to opportunities for co-ethnic exploitation between the forest labor contractor and pine straw harvesters. Most harvesters interviewed stated that they preferred informal arrangements because they are paid in cash and seldom pay the required income tax on their earnings. However, this also means that there is no recourse when grievances develop related to pay. This issue is quite common. What is more, failure to pay income tax could hinder chances at legal residency as harvesters may need to prove that they have been employed and contributing to the tax system to be eligible for many of the proposed reforms on immigration.

Pine straw is largely a regional commodity, but as biomass, there is the possibility of converting pine straw into fuel (Curtis et al. 2003; Peterson 2005). This could open the door to more intense harvesting over a larger geographical area. Commercialization of NTFPs and informality of work related to harvesting NTFPs often has detrimental effects on conservation and sustainability of the resource.

Conservation/Sustainability

Just as insecurity of tenure or access can influence harvesting practices, it is likely that harvesters' behavior is also dictated by their residency status. Undocumented harvesters and to a lesser extent guest workers, have the potential to harvest indiscriminately

because of livelihood insecurity (Ballard and Huntsinger 2006; Hansis 1998). I hypothesize that tenure and access to work in the U.S. are uncertain for the majority of pine straw harvesters. Therefore, they harvest without discretion, which in turn could hinder conservation efforts.

Pine straw is certainly a renewable resource. As long as there are pine trees, needles will continue to fall. But harvesting practices can have detrimental effects on tree growth and thus timber yield. As early as 1876, an article by Ebermeyer documented the effects of intensive litter raking on tree growth in Bavaria, subsequently linking nutrient deficiency in trees to the extraction of biomass (Karjalainen, Spiecker and Laroussinie 1999). Pote et al. (2004) find that removing pine straw promotes soil erosion and increases runoff and loss of nutrients from runoff. They maintain that harvesting every two years will ease this problem. Further, harvesters should practice best management practices.

Landowners and dealers view the issue of harvesting straw and sustainability in relation to the value of timber ("How much straw can I rake and still produce valuable timber?"). If there is no interest in the value of the timber (as in the case of an absentee landowner or a widow who has entered into a contract with an unscrupulous straw dealer) then the question becomes, "How much straw can I rake in order to cover my investment?" and the issue of sustainability becomes a moot point.

Much of the straw being harvested is harvested from land that was taken out of row crop production and planted in pine trees under the Conservation Reserve Program. In 1997 there were 189 farms under CRP contracts compared to 57 farms in 2002 in County A; there were 122 farms under CRP contracts in 1997 compared to 43 in 2002 for

County B (USDA 2002). The Conservation Reserve Program pays farmers to take highly erodible soils out of row crop production – a form of soil conservation. Contracts last ten to fifteen years and under these contracts, trees or grasses must be planted. A stipulation of the contract forbids landowners from harvesting trees or straw for the duration. It is for this reason that none of the landowners interviewed had renewed or plan to renew their CRP contracts when they expire.

Slash pine is generally grown on a 30+ year rotation. At this point in time, it is difficult to assess the potential harm to soil and water resources that result from harvesting or over-harvesting straw. In the early 1990s, it was reported that removing pine straw every two to three years was not likely to contribute to soil erosion (Morris, Jakela and O'Conner 1992). It was further noted that only sites with low potential for erosion should be used for intensive pine straw harvesting activities. This recommendation is clearly contradicted in the study area as the majority of land managed for pine straw was at one point considered to be highly erodible by the Conservation Reserve Program. Based on interviews with landowners and dealers, they feel there is minimal impact to the soil, wildlife, trees or water resources. Any nutrients that are taken by removing pine straw can easily be replenished with fertilizer. In fact, some landowners and dealers believed that removing straw had positive effects on the growth of trees. By spacing and thinning trees for optimal straw harvesting, trees have a better chance of survival and growth.

Ballard and Huntsinger (2006) and Love and Jones (2001) speak of harvester ecological knowledge and its potential for the formulation of NTFP harvesting policy. Although pine straw harvesters are the closest to the resource, they seem to show little

interest in sustainability or conservation of the resource, reflecting their precarious status. Browder (1992) notes that when the harvesting of NTFPs was first promoted in the Amazon, it was a marginal activity usually undertaken by poor people on other people's land. With no vested interest, they were similarly uninterested in conservation or sustainability. A similar mind-set exists among landowners and pine straw dealers although their motivation is different from that of harvesters. While uncertainty about the future motivates the harvesters to harvest indiscriminately, the prevailing sentiment among landowners and pine straw dealers is that there will always be pine trees in the Southeast; therefore, there will always be pine straw. While this is true for the brokers, it is not necessarily true for landowners using poor management techniques. Essentially, harvesters take their cues from those in charge, but for different reasons. Due to lack of long-term investment by landowners and brokers for this particular activity and because of the steady steam of income harvesting straw provides, there is no incentive for harvesters to be ecologically aware. However, some harvesters do note variations. A longtime pine straw harvester noted that (obviously) there was more straw to rake when particular tracts were left fallow. He also noted that when particular tracts were harvested several times during a year, there was a noticeable difference in the condition of the trees. He pointed out tree cankers and bug infestations occurring in the more frequently harvested tracts. He also noted the difference in plots where landowners thinned their trees and those that were not thinned. Those left un-thinned had much higher rates of tree mortality. Some landowners, perhaps because of pine straw contract

stipulations or greed, do not thin their trees believing that more trees lead to more straw. Consequently, they often end up with worthless timber.

Discussion

The traditional management model for forestland in the Southeast has focused on timber maximization. Logging is inevitable as it is the principal reason that landowners plant trees to begin with. Forest land in the Southeast is mostly privately owned. In Georgia, 93% of all timberland is privately owned (Thompson 1998). Although pine straw has probably always been employed for personal use, it has been commercialized and is now sold for use in landscaping and construction. Increasing demand can be linked to rapid urbanization across the Southeast. Perhaps due to the 'timber maximization' mind-set which is essentially equated with profit maximization, private forest landowners in my sample are approaching harvesting pine straw in the same way. There also exists a culture of extractivism in the South – cotton production, row crop production and now timber production. Profits from extractive activities pay for continued investment in timber (when such investments are made) unlike budgets on Forest Service land or national parks, which receive funding through Congressional appropriations.

The harvesting of pine straw is at the will of forest landowners. Indeed, landowners have transformed the landscape from one dominated by row crops to one heavily planted in slash pine, originally for timber but transitioning into pine straw production. They, through various access scenarios, allow dealers and harvesters to harvest their straw. Because the straw is harvested from private land, the Forest Service does not regulate access through permits. There is no official permit necessary to harvest straw, although Georgia has a "Certificate of Harvest" meant to protect landowners from

theft. None of the landowners and harvesters interviewed use it and none had heard of it. Officials in the state office confirm that the use of this certificate is not enforced. Because the straw is harvested from private land and because the state does not track or enforce the Certificate of Harvest, there is no reliable mechanism to determine the amount of straw being harvested, from whose land and by whom. Interviews with dealers, landowners, contractors and harvesters provide a rough estimate. There are approximately 139 thousand acres in straw production in the two-county study area. Based on interviews, an acre of timberland has the potential to produce 150 to 300 bales of pine straw totaling over 27 million bales of straw harvested annually. However, the actual number depended on numerous factors that included stand age, number of years in straw production and the weather, whether the site had been thinned, and how often the site had been harvested. Answers from interviewees regarding number of bales raked ranged from tens of thousands of bales to millions of bales per year. These estimates are based on the four dealers interviewed in the study area. What is certain is that the pine straw industry is a multimillion dollar industry, contributing over up to $64 million to Georgia's economy in 2006 (Boatright and McKissick 2006). The majority of this amount comes from the region that includes the study area. Bales of straw often retail for $4 to $6 depending on the retailer and quality of the straw while harvesters earn roughly 80¢ per bale and can pack between 30 and 60 bales per day. On an individual basis this is not much, but based on estimates, labor costs total approximately $21 million annually. According to harvesters however, the amount they earned per bale had not increased for the duration of the time many harvesters had been employed in this industry, some as long as fifteen years. Harvesters are also paid based on what they take out, not what they

leave behind. In other words, there is no benefit in leaving straw on the ground to mature as a mushroom harvester might leave an immature mushroom. Straw that is left behind begins to decompose. The more straw you bale, the more money you make, period. The same logic can be applied to landowners and dealers.

Although it is a bit of a stretch to compare a pine plantation to a rain forest, many landowners are beginning to recognize the potential economic value of keeping their forest intact rather than harvesting. Pine straw is, of course, produced along side timber. But as many landowners push past the 10-year pine straw harvesting mark, they are beginning to wonder if continuing to harvest for straw rather than logging for timber is more economically profitable and a better use of their land. There are certain considerations to take into account. For example, there is a natural decline in the amount of pine straw that is shed as trees age. And again we must take into account long term effects on soil, water resources and wildlife which affect not only the landowner but society in general. Further, in spite of recommendations on the frequency and amount of extraction and the method of collection, forest landowners often circumvented this advice for the sake of profits from the sales of this biomass which was initially used to fertilize agricultural crops.

Conclusion

Scholarship on NTFP harvesting in the U.S. has largely been situated in the Pacific Northwest and more specifically on federally owned lands. There is a striking contrast between NTFPs harvested on private land versus those harvested on public land.

Pine straw now joins the ranks of floral greens, wild edibles and medicinals as a non-timber forest product. However, as this paper illustrates, pine straw does not fit

neatly within widely accepted definitions of NTFPs. Nor does it fit the literature that thus far examines NTFP access and harvesting on public land, usually involving some type of permit scheme. The motivation behind the permit system is not to maximize profits but to manage resources in a balanced and environmentally sustainable manner.

Issues of access to the resource and sustainability of the resource exist in different contexts in the Southeast compared to the Pacific Northwest for a number of reasons, with private property being the main point of divergence. Access to pine straw is not regulated through any access schemes, and, although a Certificate of Harvest exists, none of the harvesters or landowners had heard of it, thus none used it. Management of pine straw in the southeastern U.S. is motivated by profit maximization. In a private property-based and profits-driven system, ecological concerns take a backseat to pecuniary ones. Access to resources is an important determinant of how the resource is harvested. Uncertainty and short-term access will most likely promote indiscriminate harvesting of the resource. Pine straw harvesting is characterized by short-term access and uncertainty about the future especially for undocumented workers. Landowners are driven by the desire to maximize their income, and will also promote indiscriminate harvesting especially if they believe that pine trees and pine straw will always be present, and indiscriminate harvesting will not harm the environment. This practice is not sustainable from an ecological standpoint, because it promotes greater erosion of the soil, and as one harvester notes, has untold effects on tree growth and value.

The commercialization of pine straw has been shaped by an informal system of employment. Thus, there are few official barriers to entry of migrants and immigrants into this occupation. Further, unregulated access based on informal work arrangements

promotes the exploitation of new workers mostly by other co-ethnics but for the benefit of the industry as a whole.

The truth of the matter is that when you are dealing with private land, researchers can make recommendations to landowners regarding harvesting practices, but there is no way to ensure that landowners follow these recommendations as they must weigh these against timber, straw and profit maximization. This study is a ground-truthing of sorts, revealing current practices within the pine straw industry. Within the study community, the harvesting of pine straw on privately owned forestland is characterized by widespread use of marginal, exploitable, cheap and undocumented labor and extensive, widespread and heavy harvesting of straw.

CHAPTER 4

IN A CLASS OF THEIR OWN: FOREST LABOR CONTRACTORS IN THE PINE STRAW INDUSTRY

The reliance of immigrants on information gleaned from social networks is commonplace when making the decision to migrate or when finding shelter or employment in their country of destination (Massey et al. 1987). Tapping into immigrant social networks by employers to procure labor is also common practice, particularly in industries in which indirect subcontracting is the norm (Casanova 2003; Cranford 2005; Sanders, Nee and Sernau, 2002).

In the southeastern U.S., the pine straw industry is a prime employer of Latino immigrants, mostly from Mexico. It is an industry characterized by informal work arrangements and pine straw dealers largely depend on intermediaries to secure labor to harvest pine straw. Forest labor contractors in the pine straw industry have become an indispensable part of the "social infrastructure" of migration to the particular study community (Massey et al. 1987). Further, forest labor contractors are in a unique position of power as both pine straw dealers and immigrant harvesters depend on them. An analysis of forest labor contractors in the pine straw industry and harvesters in the pine straw industry reveals an exploitative relationship. In this paper, I discuss the various points of exploitation. I demonstrate that while there are certainly some benefits

in access to social networks such as finding work, shelter, or transportation, the nature of particular networks and the contexts in which they exist can lead workers to low skill occupations resulting in limited increase in human capital(knowledge, skills, ability).

With increasing frequency, scholars are noting the presence of Latino migrants and immigrants in forest-related occupations (Ballard and Huntsinger 2006; Brown 2001; Casanova and McDaniel 2006; Emery et al. 2005; Hamilton 2004; McDaniel and Casanova 2003, 2005; Moseley 2006; Sarathy 2006). Sarathy (2006) in particular describes the "Latinization" of forest contract work as a series of steps in which Latinos were drawn to the Rogue Valley to harvest crops, then moved into forest work and later into power positions as licensed forest labor contractors. Throughout the Southeast, Latinos are the dominant workforce in carpet manufacturing, poultry and meat processing as well as agricultural occupations such as harvesting and work in packing sheds. Like many of these industries, the pine straw industry draws upon the networks of forest labor contractors to procure pine straw harvesters.

There exists an abundant literature that focuses on transnational social links as the dominant factor of migration (Boyd 1989; Mahler 1995; Massey et al. 1987; Massey and Espinosa 1997; Menjivar 1997; Phillips and Massey 2000; Singer and Massey 1998; Villar 1992). Rather than following more traditional "push-pull" theories of migration, these scholars examine the role that social networks play in influencing a person's decision to migrate. Information lowers the risks associated with immigration. In numerous studies, the concept of 'immigrant social networks' is framed in the context of the benefits they provide to the immigrant or as a form of social capital (Aguilera and Massey 2003; Massey et al. 1987; Portes and Sensenbrenner 1993; Sanders et al. 2002).

Social networks are conceptualized as sources of "reliable information about economic and social conditions" in the receiving country and "... available to all members of the network" (Borjas 1990: 184). These networks, and inclusion in or access to them, are based on ethnicity or kinship ties. They are often characterized by the strength of ties to the network with kinship being a strong tie and ethnicity being a weak tie. As is often noted in studies on social capital resulting from social networks, both immigrants and employers benefit (Aguilera and Massey 2003; Massey et al. 1987; Sanders et al. 2002). Aguilera and Massey (2003) further hypothesize that employers reduce their recruiting costs when hiring through informal social networks.

Ties to a network are often characterized by their strength; that is, a strong tie would be one based on kinship while a weak tie would be one based on *paisanaje* (from the same town, village, etc.) or based on friendship. Granovetter (1983) argues that weak ties grant a person more mobility, particularly in cases of job opportunities. Acquaintances, because they move in different circles, (their own set of strong or weak ties) rather than close kin are likely to have more, and more varied, information on jobs and how to find one. He further argues (1983) that those with fewer weak ties are limited to information acquired from only close friends or family. Networks lacking weak ties are therefore stunted in their ability to broaden ideas or endeavors. Granovetter (1983) stresses that the weak ties allow for more rapid integration into an immigrant's host society, because immigrants are forced out of the comfort zone of family or strong ties. Aguilera and Massey (2003) examined differences in earnings and formal sector employment in documented and undocumented Mexican immigrants. They found that the strength of ties was highly correlated with ability to earn higher wages and gain

employment in the formal sector, particularly for undocumented immigrants. Of those undocumented immigrants studied, they found that whether one found a job through a relative or friend "does have a strong positive influence on the odds of being in the formal sector for undocumented migrants (Aguilar and Massey 2003: 685)."
Portes and Sensenbrenner (1983) state that, "immigrants' economic destinies depend heavily on the structures in which they become incorporated and, in particular, on the character of their own communities." As an example, they cite the devaluation of job-related skills that immigrants bring with them to the receiving country. A poor command of the language in the receiving country will further dampen immigrants' ability to succeed economically. They also review the negative effects of social networks with regard to immigration, which they call a 'social debit' (Portes and Sensenbrenner1983: 1338). Access to information from social networks often brings about success, but this success can be accompanied by problems that include: leveling pressures (the desire to maintain ethnic solidarity by keeping members of the community on a level playing field), free-rider problems (the sense of obligation of successful community members to employ or help other co-ethnics, even at the cost of their own success), restrictions on individual freedoms (community norms constrain individual action). When viewed through this framework, these social debits are a result of social capital, thus the problems result from the acquisition of capital.

Sanders et al. (2002), in their study of Asian immigrants to Los Angeles, maintain that co-ethnic ties in employment, particularly during the early stages of immigrant settlement, tend to be helpful. However, jobs found through social ties tend to be jobs of low prestige. Thus, immigrants have a much better chance at finding higher status jobs

through impersonal ties. Similarly, while interpersonal ties were not helpful in finding employment of higher status, they found that English language skills facilitate such moves (Sanders et al. 2002).

Casanova (2003) found that social networks played an integral part in recruiting H2-B guest workers to tree planting and forest management jobs in the Southeast. Contractors relied heavily on this type of recruiting stating that they no longer did any formal recruiting themselves as the networks had taken on a life of their own thus supplying them with an endless stream of potential workers. Casanova (2003) further notes that recruitment of kin through social networks provided a form of social control that benefits employers. Workers were very particular regarding whom they allowed into the recruitment network as most did not want to recommend anyone other than those they considered to be dependable and hardworking. Workers often recruit close family members such as fathers recruiting their sons or sons-in-law. These close ties ensure, through a sense of social obligation, a workforce that is reliable.

But as Cranford (2005) and Menjivar (2000) argue, social networks often become mechanisms of exploitation in particular contexts. Cranford (2005) examines social networks outside of the context of social capital through ethnography. Rather than focusing on how immigrants get ahead through social networks, she instead examines *who* benefits from social networks and in what political and economic context. In her study, she asserts that social networks have aided in the restructuring of particular industries because benefits from such networks accrue within the firm rather than the worker. The readily available labor of mostly Mexican immigrants supported the restructuring of the janitorial industry in Los Angeles. Rather than directly employing

janitors, as had been the case for many years, building owners have taken to subcontracting the cleaning of their buildings. In her case study of the janitorial industry in Los Angeles, Cranford (2005) also notes the use of "hired supervisors" who tap into social networks to recruit Latino janitors. In addition to hostile immigration legislation and a working class community (much of which is undocumented), she asserts that subcontracted work relations increase the likelihood of exploitative relations within immigrant social networks.

Similarly, Menjivar (2000) finds that immigrant social ties can be contentious in nature, particularly if the social networks immigrants belong to 1) have a disadvantage in the labor market, 2) are a resource poor community, and 3) are illegal aliens. Social class is a significant indicator of the quality and quantity of resources that immigrants will have available to them and to reciprocate with. Menjivar (2000) further notes that social networks are not static; rather, they differ especially with respect to the time of arrival of particular immigrants. In her study of Salvadoran immigrants arriving in San Francisco, she finds that the nature of social ties changes due to structural conditions in the receiving community. This is attributed to the physical and material conditions of fellow immigrants in the community and the adoption of the cultural and ideological norms of the host society. Thus, although Menjivar (2000) finds contention within social networks, that leads to abuses among co-ethnics, but she attributes this to a community that is unable to reciprocate or uphold its position in the social network.

The studies presented by Sanders et al. (2002), Cranford (2005) and Menjivar (2000) provide examinations of immigrant social networks in the more traditional gateway cities of Los Angeles and San Francisco, in a state (California) that has a long

history of receiving immigrants. They each explore the processes by which immigrants are incorporated into the host society through social networks. Cranford (2005) and Menjivar (2000), however, do not locate their studies in the context of social capital. Instead, they critically examine the contexts of the host communities and what effect context may have on immigrant social networks and their capacity to be beneficial to immigrants. The receiving context of pine straw harvesters in their communities is similarly significant.

I examine immigrants and their social ties as they are incorporated into a rural economy in a natural resource-related industry. I focus primarily on the forest labor contractor and his relationship with immigrant harvesters and pine straw dealers. I employ Cranford's (2005) framework to examine co-ethnic exploitation in the pine straw industry in a particular community in the Southeast. I argue that access to social networks in this case brings about relative success for immigrant pine straw harvesters but often at a cost. While immigrants and pine straw dealers reap some benefits from access to social networks, the true beneficiary is the forest labor contractor due largely to information asymmetry.

Methods

This case study is part of a larger qualitative study on the pine straw industry in a rural community in the Southeast. It is based on seven months of fieldwork between 2004 and 2006. For this article, I draw upon personal interviews with forest labor contractors, pine straw dealers and pine straw harvesters. Interviews and conversations with harvesters focused on how they came into this particular occupation and for dealers, the methods they used to acquire labor and their relationship with forest labor contractors.

The study occurred in a two-county area of Georgia. The particular study area was selected for a number of reasons. First, the two counties selected are among the top ten pine straw producing counties in the state of Georgia. As one key informant put it, "ninety-five percent of forest landowners in the area are harvesting their straw; the other five percent call me every day to figure out how to get into the business" (Interview, May 2006). To protect the anonymity of informants, the counties (when mentioned) will be called County A and County B. Both counties are heavily planted in either pines or agricultural crops, although occasional pecan orchards can be seen throughout the area. The area was also selected because it is one with a settled Latino population. Although Latino migrants still transit through the area, coming and going with the seasons, there are significant numbers of Latinos who have settled in the area and call it home. The approach of this study was qualitative in nature. Key informants were used to identify participants for this study; after which snowball sampling was used. Ethnographic and qualitative research methods are often used to describe contemporary events or occurrences in depth as opposed to explaining why they occur (Yin 1994). Ethnography describes a culture or community and involves both listening and watching (Bernard 1995). These methods are used when the focus of a study is on the process of events as they unfold, within their particular context, rather than on an end result.

Participant observation allowed me to make the workers comfortable with my presence while at the same time documenting the nature of the work and conditions associated with packing pine straw. In this study, participant observation and semi-structured interviews were undertaken with 46 pine straw harvesters, eight landowners and four pine straw dealers. Within each of these categories there exist differences and

similarities: Latino harvesters include forest labor contractors who are for the most part documented Latinos and former harvesters. Although most of the harvesters interviewed were male, eight women were interviewed. All but six of the harvesters were undocumented. Out of these six, four were forest labor contractors who were either U.S. citizens by birth (of Mexican origin), naturalized citizens, or permanent residents. None were originally from the area having migrated from Texas or Mexico and several became permanent residents during the Immigration Reform and Control Act of 1986.

There are numerous pine straw dealers in the study area; most are considered small enterprises with less than nine employees on their payroll. Size differences are reflected in the number of bales of straw bought/sold per year. Three pine straw dealers were identified through a list from the Georgia Forestry Commission; the fourth was identified through a local key informant. Numerous government employees were contacted and interviewed for this study. Landowners generally owned hundreds of acres, but had different management styles and desires for their land. There was variation among owners in terms of their sophistication and understanding of the market.

Approximately half of the harvester sample was derived through personal contacts and through relatives of harvesters. A portion of the harvester interviews (a total of 7) were "cold" contacts: as I drove throughout the study area, I would often see cars, trucks and vans parked at the edge of pine stands and I would stop and introduce myself and the study. Sometimes I had takers; sometimes I did not. This mix of approaches was done in an effort to ensure that the harvesters interviewed were representative of the entire population of harvesters. That is to say that harvesters were not all identified through brokers, forest labor contractors or landowners. Three other harvesters

introduced themselves to me at a community function after hearing about my project and still another harvester called the Spanish-language radio station that allowed me to discuss my study on the air. Names of subjects interviewed for this study have been changed to ensure their anonymity.

Once interviews were completed, a smaller number of informants were contacted for follow-up and more in-depth interviews. The majority of interviews took place on site – in pine plantations. One landowner interview was conducted over the phone and one dealer interview was initiated through fax and completed with a follow-up phone call. The majority of harvester interviews were conducted in Spanish. Each semi-structured interview lasted approximately 30 minutes. Follow-up interviews lasted about an hour. There were several days spent observing in the field, where I toured tracts and facilities. Because some respondents regarded me somewhat suspiciously, none of the interviews were tape-recorded. I took notes by hand, which were transcribed after leaving the field site.

The Context of Reception

The context of reception includes the economic, political and social characteristics of the receiving community. Each of these characteristics shapes the lives of new immigrants. The economic context dictates labor market opportunities: whether immigrants can find jobs in the formal or informal sector, if they are competing for jobs with native workers. The political context determines whether or not immigrants are full members of the local community or if they stand outside the law. The social context affects the resources available to the immigrant community, either through social networks or ties to the larger community and shapes their ability to strengthen or grow these ties.

The majority of harvesters and forest labor contractors interviewed in this study were Latinos of Mexican descent. They were characteristic of the local Latino community as a whole: working class, citizens by birth or naturalization or undocumented. Over 90% of Latinos in the study area are undocumented.

Economic

The study subjects have been incorporated into a rural economy based primarily in extractive industries. The prime employers of migrants and immigrants in the area are agricultural farms, poultry processing facilities and the forest industry. Latinos, particularly the undocumented, tend to be concentrated in these occupations.
Within the past twenty years, government programs such as the Conservation Reserve Program (CRP) have led to a shift from agriculture to forestry and thus many farmers have converted much agricultural land to pine plantations. Landowners grow trees for saw timber, pulp, and more recently, to harvest pine straw for use in landscaping.

Landowners interviewed for this study suggest that the expiration of CRP contracts flooded the market with timber and consequently resulted in declining prices and thus profits, because of increased competition. Investments in forestry are long-run with sunk costs that cannot be recouped in the short-run. Because of sunk costs and the nature of the industry, forest landowners cannot exit in the short-run and wait for better times. Market rigidity, such as U.S. labor laws further complicate things. Landowners are faced with two alternatives: 1) minimize cost by adjusting their production matrix and/or 2) find new products to maximize profits. Forest landowners in the study area have taken advantage of both alternatives.

Pine straw is a recently commodified by-product of pine plantations. It generates millions of dollars for forest landowners throughout the Southeast. Although machinery exists, pine straw is raked and baled by hand. This is preferred by end-users such as landscapers who complain that bales packed by machines are packed too tightly and are harder to un-bale. Landowners and pine straw dealers note that before it became a major industry, pine straw was harvested by local, native workers; the industry has now switched to a primarily undocumented, Latino workforce.

Like many other industries that have restructured in order to remain profitable, the forest industry is characterized by core and periphery employment. Jobs such as logging, tree planting and thinning have been decentralized and are now the domains of either migrant guest workers (Casanova 2003) or undocumented Latino immigrants. It is still unclear whether the use of immigrant labor preceded, and thereby aided in, restructuring or followed restructuring and supplied a labor force where a native one was uninterested in decentralized employment.

Political

A small number of the settled Latino population in the study area either are U.S. citizens by birth, marriage or became naturalized citizens after the 1986 Immigration Reform and Control Act (IRCA). As noted previously, the vast majority of Latinos in the community are undocumented immigrants.

Because of the history of employing migrant and immigrant Latino workers in agriculture, landowners are no strangers to scrutiny of their labor from the federal government. In 1998, farmers were outraged when Immigration and Naturalization

Services (INS)[1] raided their farms while the crop was still in the field. They argued that federal programs for legally employing migrant workers were too costly; both in terms of what they would be required to pay workers and in administrative costs (see Apple 1998; Stern 1998; Thompson 1998). Their lobby in Washington persuaded INS to leave them and their workers alone and look the other way while the crop was harvested. Since that time, however, perhaps due to a growing and more visible Latino presence or perhaps due to the mounting immigration legislation debates, numerous raids by immigration officials were conducted during my time in the field. It was also a time of boycotts, marches and rallies for immigrant rights in the face of anti-immigrant legislation at the state level and proposed legislation at the national level. It is apparent that new immigrant arrivals entered into a hostile environment on the macro level but landowners and pine straw dealers stress that they could not remain profitable without the presence of immigrants.

Social

The Latino community in the study area is largely working class and largely undocumented. In terms of social class, there is an obvious line drawn between the settled Latino immigrants that have lived in the area for quite some time, many since the early to mid 1980s, and temporary migrants and new immigrants. Again, this is based on immigration status but also on the settled population's experience, contacts within the local community and a stronger command of the English language.

These characteristics distinguish them from Latino migrants that transit through the area harvesting agricultural crops and immigrant new arrivals. Most Latinos in the

[1]Now known as the U.S. Citizenship and Immigration Service

area, whether they are U.S. citizens, migrants or new arrivals, have connections to agriculture. Latinos who have lived in the area for over twenty years settled after migrating through as farm workers.

The community boasts a variety of Latino grocery and convenience stores, a number of Spanish-language news publications and at least two Spanish-language radio programs. Latinos in the community generally do not own land and when they do the size is generally only large enough for a homestead. At least one Latina landowner noted that she was charged exorbitant interest rates on her land when she purchased owner-financed property from a local landowner that had parceled off some pasture land. She further noted that many Latinos enter into such agreements and often lose their land due to failure to pay. While unfortunate, it is not surprising that they might be taken advantage of by unscrupulous residents of the community.

However, it is the Latino forest labor contractors, once migrant workers themselves, who have emerged as the primary exploiters of immigrant labor in the pine straw industry in the study area. This is a somewhat paradoxical position: on the one hand labor contractors align themselves with co-ethnics on issues related to race and immigration, particularly during boycotts and rallies. On the other, they dominate and exploit co-ethnics for their own personal gain.

Networks of Convenience

The use of social networks to find harvesters works to the advantage of both the pine straw dealer and the forest labor contractor as both benefit from cheap labor and other rents while avoiding the responsibilities a formal employer would have. Pine straw dealers generally contract with a forest labor contractor, although there was one case in

which a dealer directly employed this intermediary. The forest labor contractor in turn organizes crews to harvest. This puts the forest labor contractor in a position to negotiate the terms with pine straw dealers often without having to consult with harvesters; thus he possesses information that harvesters are not privy to. Although longtime harvesters noted that the amount paid per bale has not changed since they took the job (10-15 years), pine straw dealers mentioned that their cost for labor has increased. Aguilera and Massey (2003) emphasized the benefits accrued to employers by tapping into social networks for workers and through informally employing them.

It is obvious, then, that the forest labor contractor essentially sets his own terms with the pine straw dealer and he then compensates harvesters. Forest labor contractors are essentially network gatekeepers. The network, although part of an immigrant network, is also an employment network with information that is used to match workers to jobs and jobs to workers. The forest labor contractor has access to information from both sides.

The context of the study area is one in which new immigrant arrivals are common. It is a relatively rural area dominated by agricultural row crops and pine plantations. Thus, there is a history of using migrant labor. However, the contrasts between the local landowners and the immigrant workforce are striking. Landowners and pine straw dealers are white, educated males while the majority of harvesters are Latinos with little education and lacking in legal documentation to work in the U.S. Forest labor contractors are somewhere in between, both figuratively and literally. As the intermediary between the dealers and harvesters, contractors interviewed all have legal immigration status, either through birth or from the passage of the 1986

Immigration Reform and Control Act (IRCA). They have a good command of the English language and longer ties to the local community. At least one contractor is considered a community leader. Their ties to the community and language skills have enabled them to forge relationships with dealers. Dealers speak of the work ethic of the labor contractors and their ability to always be able to get crews together.

Recreating Farm Labor Practices in Forestry

Forest labor contractors bear a striking resemblance to farm labor contractors described by Krissman (1995) as well as Rothenberg (2000). Krissman (1995) details the negative relationship between the use of farm labor contractors and deteriorating working conditions of farm workers in California. In an effort to reduce labor costs, agribusiness in the state procures workers from contractors, rather than hiring workers directly. This in turn offers them a reprieve from labor and immigration laws. He finds that as use of contractors has increased, conditions faced by farm workers and their families have worsened throughout rural California.

How is it that farm labor practices are so easily replicated in forestry, particularly in the Southeast? In the case of pine straw harvesting, the vast majority of harvesters supplement their work in agricultural fields with pine straw harvesting and still others have left agricultural work for pine straw. Labor practices are easily replicated and adopted in forestry because it is a system that has worked for agricultural crops. As in forestry, a labor contractor helps the farm owner to procure labor to harvest his crops. There is some variation, however. Farm workers are often migratory while work in pine straw or a mix of agriculture and pine straw allows workers to engage in year-round work in the same place.

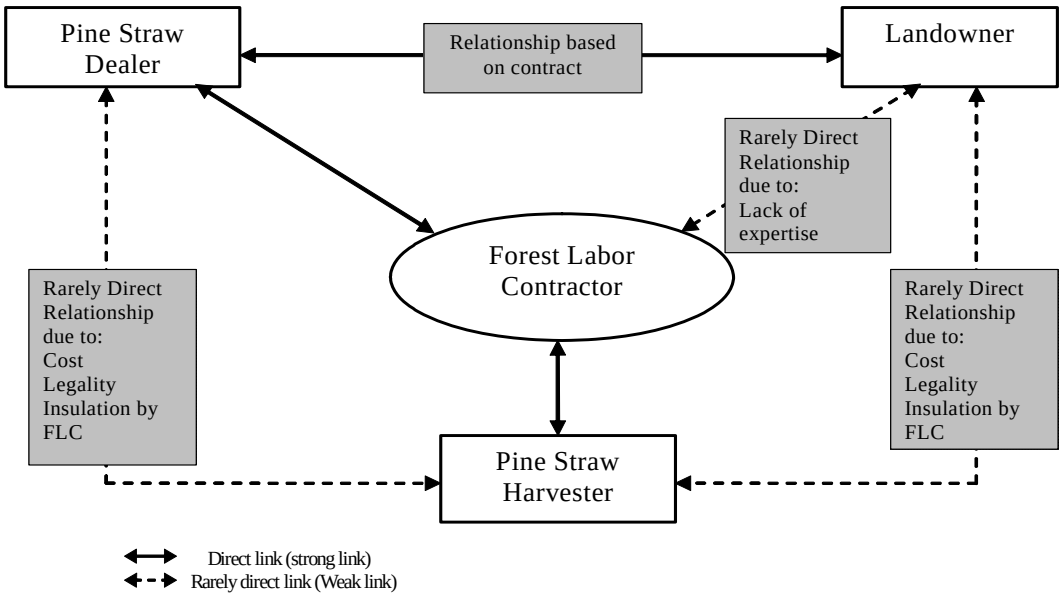
Current immigration policy is a disincentive to pine straw dealers to directly employ harvesters as there are legal repercussions related to hiring undocumented workers. Although there is a guest worker program already in place (H2-B), all dealers interviewed feel it is costly and time consuming. By using an intermediary (a forest labor contractor) the pine straw dealer washes his hands of legal responsibility for harvesters. However, it also places a good deal of power into the hands of the forest labor contractor.

Below is a graphical representation of the relationships between actors in the pine straw industry in this particular community. Rarely is there a direct relationship between pine straw dealers and harvesters. This is due to a variety of reasons, which include cost – both explicit and implicit – and issues of legality. Implicit costs for a direct relationship between dealers and harvesters are based on the language barrier, the social and physical isolation of immigrants, mistrust and the time involved in getting beyond these issues. In terms of legality, because it is common knowledge that most harvesters are undocumented, dealers tend to steer clear of formally employing them.

Rarely are there relationships between landowners and forest labor contractors or landowners and harvesters. Forest labor contractors lack the sophistication or business acumen to deal directly with landowners – after all they specialize in labor, not pine straw. Pine straw harvesters, as noted earlier, are both socially and physically isolated within the community. This fact coupled, with the language barrier, makes it almost certain that harvesters will have few dealings with landowners. Thus, the forest labor

contractor works as an information clearinghouse within the industry. He tends to dispense information selectively. He serves as a filter between harvesters and dealers for control and personal gain.

Figure 4.1 Relationships Between Actors in the Pine Straw Industry



The forest products industry in the Southeast is following the path of agribusiness in California as described by Krissman (1995). Forest management, including tree planting, brush thinning and herbicide application, is now the work of migrants and immigrants, procured by forest labor contractors. The majority of tree planting in the Southeast is by the hand of transnational guest workers. These guest workers are the

temporary employees of forest labor contractors who each year apply for H2-B visas to legally bring these workers into the country. Although there is controversy surrounding their sometimes unscrupulous behavior, these forest labor contractors are legitimate and formal employers.

However, pine straw harvesting tends to be an industry in which harvesters are informally employed. The forest labor contractor in this situation has taken his cues from farm labor contractors and, in fact, may have at one time worked as a farm labor contractor. Farm labor practices are essentially recreated in the pine straw industry to the benefit of forest landowners and pine straw dealers and, surprisingly, the forest labor contractor.

Weak Ties, Strong Ties

The study area benefits from a labor force with regular experience in the agricultural fields that dot the area. Many harvesters transit through, or have settled in, the area after being drawn in by agricultural work. Just as crop fields and pine plantations are often contiguous, many workers move seamlessly from one occupation to the other. Many harvesters arrive in the area knowing almost no one, other than the person who brought them to the area (*coyote*), and not speaking a word of English.

Access to information or people with the knowledge of how to get across the border is vital to many immigrants making the journey. Access to credit, or arrangements with transporters or *coyotes*, to work off the cost of the journey makes it easier to migrate. The literature stresses that access to this type of information results in social capital (Massey et al. 1987). In this particular context, however, it promotes exploitation.

Through interviews with harvesters and land owners, it was revealed that a number of forest labor contractors arrange the passage of many harvesters in the area, acting as the *coyote* or person who arranges and/or transports undocumented immigrants into the country. One particular immigrant harvester and his daughter discussed this fact but refused to elaborate on the cost of the trip or length of time it would take them to work off the debt. However, six years was mentioned in interviews with other harvesters and landowners and in that six-year span of time, indebted workers must work where and when they are told, even if means forgoing greater pay for themselves at other jobs. A pine straw dealer interviewed for this study mentioned offering steady jobs to several harvesters and being surprised when turned down until he learned that they were working off a debt.

Based on harvester interviews, I found that entry into harvesting in the pine straw industry was characterized by weak ties for the majority of workers. Many pine straw harvesters learned about the job through co-workers in the agricultural area. Still others stated they could see Latinos toiling in the woods and walked over and inquired what they were doing. As an undocumented harvester explained to me, the *coyote* one uses to cross the border is usually the "friend of a friend of a friend" or a weak tie. And unless one has enough cash to pay up front, many undocumented immigrants cross with the knowledge that are bound to their *coyote* until they can pay off their debt.

Weak ties, particularly in the case of forest labor contractor Edgar and two workers from southern Mexico, promote a sense of obligation between harvester and contractor. Edgar provides new arrivals with housing (often run-down trailers), and transportation to/from work. As new arrivals who must repay the cost of their journey

quickly, the sense of obligation comes from the relief of finding a job and the feeling that there is someone looking after you in a new/strange place. Miguel states, "We work hard for him, we would never think of looking for other work, he helped us after we were treated poorly in the crops. My daughter and I will work on days when nobody else is working." Miguel and his daughter Elizabeth traveled in the dark of night to arrive in the community and neither knew where they were when they arrived nor how far they had traveled. They were surprised to learn that they were so far from home when I showed them a map of North America. They were socially isolated and only communicated with Edgar or one of his crew leaders. They depended on the crew leader, Edgar's brother, to pick them up for work each morning and to take them grocery shopping. Edgar is also known to transport immigrants from Mexico and thus is considered a *coyote*. Another young woman, Marcela, stated that she worked in the pine straw industry for over six months after being brought into the country with Edgar's help. After becoming pregnant, she grew tired of working outdoors and Edgar found her a job in a restaurant. Although it was better than working outdoors, she felt that it would take longer to repay her passage working in the restaurant. However, she felt she could not complain because she worried, like many immigrants who owe their *coyote* money, about her family in Mexico.

Where Cranford (2005) and Casanova (2003) found that strong ties lead to social control within networks, I found the opposite to be true in this study. Within this particular context the weak ties present opportunities for exploitation. To harvesters weak ties are tantamount to vulnerability. Weak ties serve as a mechanism to suppress complaints from workers. Weak ties are often the only ties workers may have in this particular context. Thus, they have nowhere to turn for help or to seek other

employment. This can be attributed to political and social context of reception for undocumented immigrants who clearly lie outside the law, while documented forest labor contractors are within it. Benefits accrue not only to the pine straw dealer who has distanced himself from the hiring process, but especially to the forest labor contractor who is in a position to gain both from harvesters and as the sole contact with pine straw dealers.

Jenny, another forest labor contractor, is known throughout the area as a woman who will work as hard as any man and as a shrewd businesswoman. She began work as a harvester and quickly learned that she could earn more by having harvesters work for her. Soon she had so many harvesters working for her that she was having trouble unloading all the straw they harvested to the small pine straw dealer she was contracting with. Subsequently, she moved on to a dealer who moved pine straw by millions of bales annually. At any given time, she has ten crews of harvesters in the field. Her sons and husband work alongside her. Like with Edgar, her status, and that of her family, is vastly different from those working for her. She was born and raised in the U.S., but having worked in agricultural fields for many years in the community, she has experience dealing with landowners. She dresses better than other harvesters; her children all drive relatively new vehicles. In addition, she has purchased forklifts and other equipment to make the raking faster and easier for her crews. She owns her own home and she plans to train her sons to take a more active part in working with pine straw dealers. Jenny's harvesters are hired through word of mouth referrals. She has a reputation for working hard and making her crews work hard but, as many harvesters noted, she always has work. In spite of having plenty of work, interviews with Jenny's workers reveal that

they often have a hard time making ends meet as they are paid roughly 80 cents per bale of straw. Some newly arrived immigrants were even sleeping in the woods because they had not made enough to find a permanent place to stay. Still others supplemented their income through the help of spouses or children who would 'clean' the straw by picking out twigs and branches. Harvesters attribute this to their lack of experience claiming that it takes time to learn to pack a good bale of straw.

There were other allegations from her former workers and these were similar to allegations made by Edgar's workers. Harvesters are often told by the forest labor contractor that income taxes will be withheld. The forest labor contractor tells them that, at the end of the year, they should file a tax return. Many harvesters find out at this time that, although money was withheld from their paychecks, the forest labor contractor kept it rather than paying income taxes with it. Without legal immigration status, harvesters feel they have no recourse, so they do not call attention to it. It is also damaging to their case for acquiring legal status as they have no way to prove that they have been gainfully employed which includes paying income taxes, a requirement of the government when applying for legal residency.

Harvesters admit that there are more problems than legal immigration status; it is their lack of the ability to speak English that presents the largest barrier to better working conditions. As Joel, a harvester, 23 years old put it,

> If only I spoke English, then I would have it made, I could speak to landowners and have my own fields [to rake]; this is where the money really is.

However, Joel also lacks the ties to the community that garner trust. Although, language is important, it does not guarantee that landowners will grant access to straw.

The cases of Edgar and Jenny offer some insight into co-ethnic exploitation in the pine straw industry. Edgar and Jenny have both created rents from the presence of immigrant pine straw harvesters. Edgar acts as a *coyote*. He also owns trailers and run-down houses which he rents to his harvesters. Although this alone is not exploitation, the fact that he withholds rent from harvesters' pay is, especially in cases where workers feel they are underpaid even before rent is deducted. Workers in this situtation are reluctant to argue their case. In Jenny's case, accusations of unpaid income taxes are numerous. She also readily admits not paying for "sloppy" bales. While it is true pine straw dealers will also refuse to pay for sloppy bales, her harvesters feel that she claims work is sloppy even when dealers do not. Thus, she pockets harvesters' money unfairly.

Although it would seem that harvesters would have strategies to resist such exploitation, they seem resigned to the fact that this is the nature of undocumented immigration. A community organization has been called upon to intervene for harvesters who went unpaid for weeks; however, they often are unable to collect pay because the contractor has left the area. There is also the sentiment that pine straw harvesting offers protections that working in agriculture does not. First, there is the physical protection of trees that keeps the sun off their backs and also hides them from view of immigration authorities. While agricultural fields are in plain view from roads, pine straw is often harvested on remote plantations. Second, there is the opportunity to work year-round and remain in one place. Year-round work translates into year-round pay. If given the choice, harvesters feel that even with exploitation, pine straw work is preferable to similar exploitation in agriculture.

Conclusion

The forest labor contractor in this particular context has become a purveyor of labor, both in terms of organizing and hiring crews and in terms of arranging the illegal passage of immigrants to this country. They are indispensable to the pine straw dealers since they serve as a point of contact with harvesters. Social networks consisted of both strong (family and close friends) and weak (acquaintances, *paisanaje*) ties. There is a long history of employing menial labor, first to toil in the cotton fields, later in fields of agricultural crops and now throughout pine plantations that dot the landscape.

Findings are representative of the fact that immigrants in rural areas, even when tapping into social networks, are likely to enter into exploitative work arrangements. Clearly, social ties within this particular context, lack diversity of occupational or social class.

This case does not necessarily represent a targeted strategy of the pine straw industry to recruit undocumented immigrants. The context of the community, one with a history of employing migrants and immigrants in extractive industries, has shaped the labor process in a new extractive industry. Like Cranford (2005) and Menjivar (2000), I attempt to look at social networks outside the context of social capital. I show that access to social networks is not always beneficial to the immigrant, and where it is beneficial, benefits accrue unevenly between members of the network largely due to information asymmetry. Forest labor contractors, by virtue of their immigration status, English language skills and standing in the community have access to certain types of information that neither new immigrants nor pine straw dealers have.

In the context of a manually intensive industry based in informal employment, the social networks which feed into this industry are exploitative. Although Cranford (2005) conceptualizes worker recruitment through social networks as a form of social control based on kinship obligations, I find that recruitment through weaker ties is far more exploitative, particularly in the case of debt peonage that was mentioned widely by study participants.

Unlike janitorial work in Los Angeles, pine straw harvesting, and indeed manually intensive forest work in the Southeast, has never been unionized. Thus, even though the two groups are similar in ethnicity and immigration status, the context of the receiving community varies greatly.

In summary, strong ties to the social network were beneficial to some such as Jenny and her sons, but mostly because elements for success were already there: they spoke English, had documents and had longer ties to the local community. Newly arrived immigrants who found the job through weak ties had other characteristics in common: they were undocumented, had little to no English language skills, no ties to the local community and, in fact, they were often physically and socially isolated. Their ties brought them relatively little benefit. By working long hours and living in cramped, sometimes substandard conditions, they are able to save enough to pay off debt of passage and even to send money home. However, the lack of occupational or social class diversity in their social networks will invariably lead them into manual occupations, such as agriculture or pine straw harvesting, with little room for advancement. Advancement and thus greater success is more often achieved with time as it takes time to learn the language and to become integrated into the community. The case presented here

illustrates that co-ethnic exploitation in social networks and the level of exploitation depend on the strength/weakness of the harvesters' ties to the network. The case also shows that information asymmetry empowers the labor contractors at the expense of harvesters. Social networks are seen as a crucial element in the process of immigration. They provide immigrants with housing and employment opportunities at their destination. I have demonstrated that when ties are weak, the potential for exploitation is greater. Social networks do represent a "social capital" that can be tapped to benefit ethnic groups. The use of "social capital" is not free and does not imply that the effects are always positive. Using "social capital" entails a cost that varies depending on the strength of the user's ties to the social network.

CHAPTER 5

CONCLUSION

This dissertation contains an examination of the pine straw industry within a Georgia community. Three themes were examined in the course of this research: land use change and its political origins, the commodification of a non-timber forest product and the effects of immigrant social networks. Each of these themes relates to the predominance of undocumented Latinos within the particular sector of the forest industry in the southeastern U.S.

I explored the pine straw industry through a political ecology framework. This study is based on semi-structured interviews conducted with key actors in the pine straw industry in a community at the heart of the industry. I concentrated on three broad categories of actors in the pine straw commodity chain: Latino harvesters, pine straw dealers and forest landowners. I found that this industry has been shaped by government policies aimed at reducing soil erosion, landowners' desire to increase output and profits from their forest land, and by an abundance of Latino labor due to a steady flow of newly arrived Latino migrants and immigrants of mostly Mexican descent. In addition, rapid urbanization of rural areas of the South and the desire for aesthetically pleasing landscaping has fueled the demand for pine straw. The historical context of the South has shaped this industry into one in which benefits accumulate unevenly amongst actors.

The power hierarchies that exist within the pine straw industry intersect not only with race but with immigration status as well.

Pine straw was also examined as a non-timber forest product in the context of private property. Where the majority of scholarship on non-timber forest products in the United States is situated on public or tribal land, this study examined the harvesting of pine straw on privately owned land in a region where timber and forest-related products play a large part in the local economy. Further, I found that the commercialization of pine straw has been shaped by an informal system of employment and attracts and depends on an undocumented Latino labor force. There are few official barriers of entry for migrants and immigrants into this occupation. Timber production in the Southeast often favors profit maximization over conservation which influences how pine straw harvesting has been developed. The ecological consequences of heavy harvesting of pine straw, that goes against prescribed harvesting methods, are beyond the scope of this dissertation and an area for future study.

Finally, exploitation of pine straw harvesters by co-ethnic forest labor contractors was examined. Access and strong or weak ties to immigrant social networks are useful when making decisions to migrate. Information gleaned from social networks help immigrants find employment and shelter in their country of destination. However, in the case of pine straw harvesters, access to these networks often leads them into jobs with no hope of advancement. Thus, access to this particular social network only provides limited opportunities. It is the crucial skills that come with time, such as building ties to the local community and learning the language, rather than ties to social networks that help immigrants advance in this particular case. Further, co-ethnic forest labor

contractors benefit from their position as intermediary between a largely socially isolated group of pine straw harvesters and pine straw dealers who cannot communicate with (due to language barriers) and often cannot access pine straw harvesters.

In sum, this research provides a look at a specific industry within the Southeast that has grown out of land use changes and immigration policy. It is one centered on a once marginal forest by-product, that now contributes over $60 million annually to Georgia's economy. Although it has a largely regional market, it benefits from a globalized labor force.

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APPENDIX A

Appendix A. Harvester Interview Guide

Date:

M/F

Age: 16-21 22-32 33-42 43-52 <52

How long in U.S.?

Married?

Family size: >4 4-6 7+

Level of Education: 0-3 years 4-6 7+

Where from?

Principal occupation?

What other types of jobs have you held in the U.S.? In which other regions of the country?

How did you learn about pine straw packing?

What costs are associated with packing pine straw? Health costs? Financial costs?

Are you independently employed or are you employed by a dealer or landowner? Which arrangement do you prefer? Why?

How do you gain access to the land on which you harvest straw?

Where do you pack straw? Are these arrangements made by you? Dealer? Landowners?

How are you paid? Have you noticed a decline in pay if you are paid by the bale? An increase?

Are you aware of any restrictions or state regulations regarding the harvesting of pine straw? Is it necessary to have any type of certification or license to harvest straw?

Have you ever sold the straw you harvest directly to the consumer? Are there any regulations or restrictions related to this? Have there been (are there) any ramifications associated with this?

Do you own land? Do you own forestland? Do you have plans to purchase land?

Do you work individually or in a group? Do you work with your spouse or other relatives (children, parents, etc.)?

How do you compare forestry work with agricultural work? With regards to pay? Stability? Job security?

General Harvester Ecological Knowledge

Is there a particular time to harvest straw that is better than other times?

Are particular sites better to harvest on than others? In what ways? What are their characteristics?

How often do you harvest in a particular site?

Do you leave any straw on the ground? How much?

Have you noticed an increase/reduction in the amount of straw after harvesting particular sites? What about the quality?

Do you think that harvesting straw impacts tree growth? In what way?

Political

What are your thoughts on local/national politics related to illegal immigration?

What are your thoughts on the boycotts and immigration rallies? Have you participated? Are they effective?

Have the impacted your ability to work?

In this particular industry, who are the powerful actors? The weak or powerless actors?

What are your thoughts on guest worker programs?

APPENDIX B

Appendix B. Pine Straw Dealer Interview Guide

How long have you been in the pine straw business? Did you begin as a wholesaler or at another point along the commodity chain (Raked and sold your own straw? Landowner who sold straw to other dealers?)?

How many employees do you have? What are their primary duties? Do you directly employee harvesters or is this subcontracted out?

Compared to managing land exclusively for timber, would you say that landowners are likely to reap more profits by also harvesting pine straw? Are there additional costs to the landowners who want to also manage their land for straw? Do most landowners have a forest management plan?

How do you gain access to land? What are the different types of access scenarios (contract, verbal agreements, etc.)? Do you generally pay landowners by the bale? By the acre? Which is preferred? Why?

Who are the end-consumers of the pine straw you sell? How much straw do you sell a year?

Has the price of straw increased/decreased in recent years? (Both in terms of retail/wholesale prices?)

As a wholesaler, what would yo say your biggest expense is? Labor? Transportation? Equipment? Herbicide/fertilizer? Payment to landowners?

What are the peak demand months for straw?

Do you have a plan for how often particular sites are raked? Are they each raked every season? Is any straw left on the ground? How much?

What are your thoughts on guest worker programs?