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Farm and Agribusiness Labor: Spotlight on Georgia's Produce Industry

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Farm labor and immigration are controversial topics. Legislation at the federal and state levels is either pending or is being implemented, and will affect not only the availability of labor for harvesting food horticulture and servicing environmental horticulture as well as the otherwise impacted industries of construction, education, food service, entertainment and tourism. The background, situation and outlook for labor in the Georgia and national food horticulture arena, especially for the labor intensive harvesting of fresh produce, is presented, as is a similar diagnosis of the labor for environmental horticulture and other food and fiber agribusiness-related sectors in Georgia.

Key words: agricultural labor, e-verify, food and environmental horticulture, legislation

Nearly everyone remembers Ray Charles singing, "Just an old sweet song keeps Georgia on my mind." However the impact of the Georgia E-verify mandate and accompanying employer and immigrant sanctions and liability were anything but sweet for Georgia's agriculture and agribusiness in 2011. Georgia is not alone as a state as at least an additional dozen states passed similar legislation, with another dozen scheduled to take up the issue during the winter of 2011-12. The federal government is also proposing a mandatory E-verify bill of its own—HR 2164, the Legal Workforce Act. The common denominator for all of this legislation, for agriculture and agribusiness, is that none of the states have yet taken time to adequately recognize the importance of agricultural employment and write-in workable solutions.

In the spring of 2011, Georgia's governor signed HB 87 which, among other things, required employers to use E-verify to confirm the legal status of employees and, in the process, frightened the traditional pool of migrant farm workers so badly that most avoided the state in droves. This hit Georgia's labor-intensive food and environmental

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horticulture industries mostly by surprise because many did not believe the bill would pass, and when it did pass in April 2011 some provisions took effect July 1. Workers stopped coming to the state as soon as passage was announced, without understanding the staggered implementation of the E-verify provisions.

The situation regarding E-Verify has put the agriculture and agribusiness industries between a rock and a hard place. These industries are dependent on undocumented laborers for the production and harvesting end of food crops, like fruits and vegetables, and the production, installation, and maintenance end of environmental horticulture crops, like landscape installation and lawn care services. Even the restaurant industry, an important food-related employer, also depends on undocumented workers, as do the entertainment, lodging and construction industries. Requiring that all employees be vetted through the E-Verify system would thus leave the agriculture trade without sufficient workers to get the crops to market, and would impact sales all through the marketing channels. Yet, the industries cannot very well become an advocate of illegal immigration activity, and thus cannot very well oppose E-verify. So the official position is that mandatory E-verify is okay, provided that a revamped guest worker program is put into place simultaneously to provide a legal avenue for agriculture's labor needs.

The restaurant trade, tourism and education sectors also suffered, as restaurants that catered to the Hispanic clientele saw revenues decline as the families no longer ate there, and the labor force in the restaurants was also reduced. Hospitality needs at hotels, such as room service, also were down-sized, reducing the labor force. Summer and fall K-12 enrollments at schools fell, requiring fewer teachers resulting in increased unemployment among teachers both summer and fall 2011 and spring 2012. Day care needs also declined even more than enrollments in the school systems.

A full accounting of the losses suffered by farmers, packers, processors, shippers, brokers, and landscapers and the local communities in Georgia is not yet complete, although preliminary data has been distributed by the Georgia Commissioner of Agriculture, Gary Black, in December 2011. In mid-2011, the Georgia Agribusiness Council released its estimate of about \$1 billion of value-added losses (\$300 million in farm gate value) in spoiled and unharvested produce (fruits and vegetables) that could be incurred by the state's farm sector. A statewide farm labor survey immediately corroborated that claim as about 11,000 farm jobs were found to be unfilled in the fruit and vegetable industry alone, according to the Georgia Fruit and Vegetable Growers Association. The Bureau of Labor Statistics reported an estimate of 11.9% national unemployment for farming, fishing and forestry occupations in July 2011, while Georgia's overall July unemployment rate was 10.1%. Analysts attributed the farm labor supply gap to the lack of seasonal farm workers that could withstand the demands and working conditions of certain taxing farm work paid on a piece-rate basis (not hourly wages or salaries). While investing in innovation and adopting mechanization strategies

is financially feasible for large agribusinesses and agricultural operations, smaller businesses have difficulty justifying and affording the necessary capital investments.

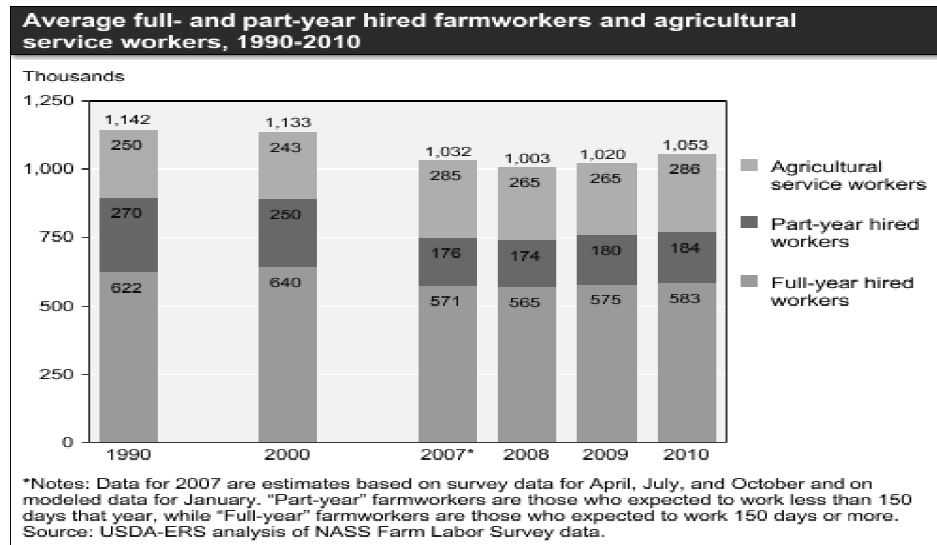
Beyond 2011, the farm labor supply gap can be remedied only if unemployed domestic residents would consider taking on the unfilled farm jobs and/or policy makers would yield to a significant recasting of the H2A program to make it a more viable alternative, especially for smaller farms. Fewer Hispanics are coming to Georgia to work, and we should expect that trend to continue. Reasons for the trend include stricter border crossing enforcement in the United States; continued growth of the Mexican economy, and people who came to Georgia for work are increasingly finding it possible to find employment back home (the unemployment rate in Mexico during July 2011 was almost half of that in the US for farming, fishing and forestry occupations); and most temporary farm guest workers want to go home after the season is over and want to be home permanently when they retire from farm work. A study conducted by the Center for Agribusiness and Economic Development (McKissick and Kane, 2011) found that some vegetable farmers are contemplating decreasing their planted acreage in 2012 while others will attempt to increase mechanization of their operations to cope with the expected persistence of the seasonal farm labor shortage problem.

The National Perspective for Rural and Farm Labor

Hired farm workers make up less than 1% of all United States' wage and salary workers, and they play an essential role in agriculture—their wages and salaries represent about 17% of total variable farm costs, and as much as 40% of costs in the labor intensive crops of fruits, vegetables, and nursery products (Figure 1). Farm employment was less affected by the 2007-2009 recession than was nonfarm employment, with farm wage and salary employment falling by one-third the rate of the non-farm economy (Figure 2).

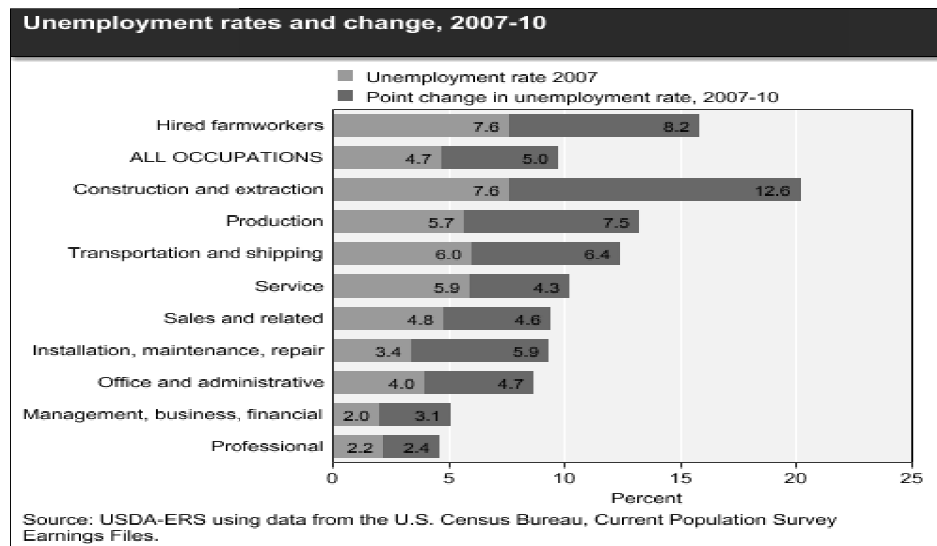
According to the Farm Labor Survey (FLS) of the National Agricultural Statistics Service, the average hourly earnings of non-supervisory farm laborers were far short of the wage for private sector non-supervisory workers outside of agriculture, but comparable to the average wage for maids and housekeepers, but lower than the wage for landscaping and grounds-keeping workers or for construction workers (Figure 3).

Figure 1. Number of hired farm workers and agricultural service workers, 1990-2010.

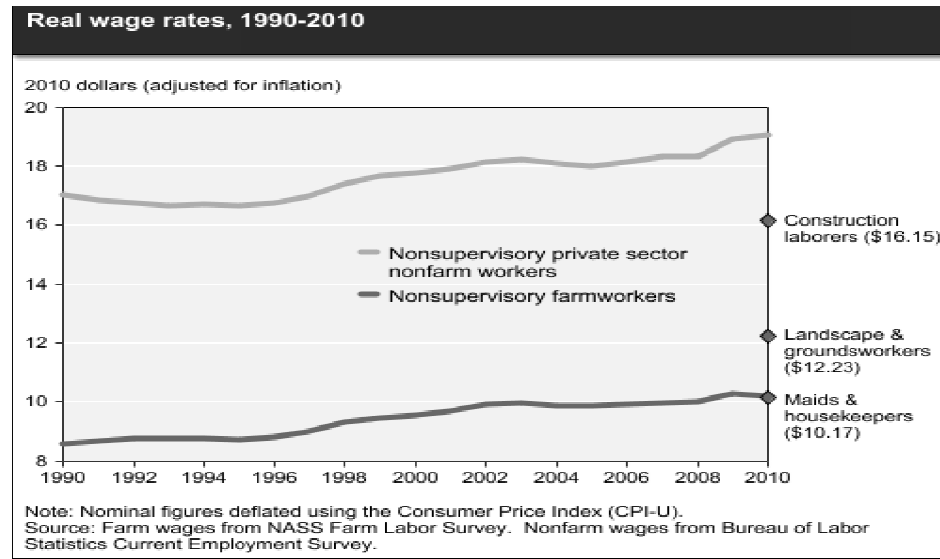


Source: USDA/ERS, 2011.

Figure 2. Unemployment rates for hired farm workers and other occupations.



Source: USDA/ERS, 2011.

Figure 3. Wage rates for farm workers and other occupations.

Source: USDA/ERS, 2011.

Almost three quarters of hired crop farm workers are not “migrants,” but are considered “settled,” meaning they work at a single location within 75 miles of their home. Among migrant workers, the largest contingent is “shuttlers,” who work at a single farm location more than 75 miles from home, and may cross an international border to get to work. One very common category was the “follow the crop” migrant farm workers, who moved from state to state working on different crops as the seasons advanced. However, these crop farm workers are now a relative rarity (USDA/ERS, 2011).

The share of hired crop farm workers who were not legally authorized to work (undocumented workers) in the US has fluctuated around 50% for the past decade (Figure 4). This information relies on data from the US Department of Labor’s National Agricultural Workers Survey (NAWS), which is the only survey that ascertains the legal status of noncitizen farm workers and the only survey that identifies hired farm workers as migrant or settled, although the survey is limited to hired crop farm workers and excludes hired livestock farm workers. Roughly 30% of the hired crop farm workers are natives of the United States or Puerto Rico, while two-thirds of the laborers are from Mexico and the balance are from Central America and other countries.

Linkages between Immigration Environments and Farm Labor Markets

Legislative Background

Legislative actions aimed at enforcing stricter immigration monitoring and controls have been pursued both at the national and state levels. In the national scene, the Illegal Immigration Reform and Immigrant Responsibility Act (IRRA) was enacted in 1996 to establish border enforcement and deportation policies (Congressional Research Service, 1997). In the aftermath of the September 11 terrorist attacks, the Secure Fence Act was signed into law in 2006 and mandated the construction of hundreds of miles of double-layered fencing along the Southern border and empowered the Department of Homeland Security (DHS) to stop unlawful border crossings (Traub, 2007).

The latest development in national legislation has been the approval by the House Judiciary Committee of the Legal Workforce Act (LWA), filed as House Resolution (HR) 2885 (Smith, 2011). Past the first step and moving forward in the legislative process in order to become a law, the LWA is starting to draw reactions from several sectors in the economy. The LWA eliminates the current paper-based I-9 system and replaces it with mandatory permanent electronic eligibility verification (E-verify) system (Smith, 2011).

Meanwhile, several state legislatures have enacted their own laws to address local immigration issues (Gomez, 2011). Arizona's State Bill 1070 created the precedent when it was signed into law in 2010. It required state police officers to ascertain immigration status of those apprehended for certain criminal violations. Alabama came up with House Bill 56 the following year and expanded Arizona's immigration policy with additional clauses for the verification of immigration status of those eligible for public benefits, such as attendance in the public school system, and the enforcement of an E-verify system for employment purposes. Utah's State Bill 497 presented a compromise by authorizing immigration status verification by state police officers and a provision for the development of a guest worker program.

Not all state laws, however, held anti-immigration sentiments (Gomez, 2011). Maryland passed a law that would grant in-state college tuition rates to certain illegal immigrants with a Maryland high school education and with tax-paying parents. There are indications that several states, such as Colorado, Connecticut, Oregon, and Rhode Island, would also follow Maryland's example (Gomez, 2011).

In Georgia, the Illegal Immigration and Enforcement Act (House Bill 87) was passed in April 2011 (Berman, 2011). The law stipulated the enforcement of the immigration verification provision in July 2011 while the E-verify provisions would be implemented on a staggered basis, as follows: mandatory for businesses with 500 or more employees by January 1, 2012; businesses with 100 or more employees to implement E-verify

starting July 1, 2012; those with more than 10 employees required to use E-verify by July 1, 2013; and exemption provided for businesses with 10 or fewer employees (Turner, 2011).

Immigration Policies and Seasonal Farm Labor Supply Gap

Some sectors attribute the difficulty in hiring seasonal farm workers to recent implementation of stricter immigration policies. In the farm sector, there seems to be some tacit understanding that undocumented immigrants were relied upon to perform farm tasks usually relegated to unskilled farm workers. The claim is that the supply of unskilled farm workers has been constrained by implementation of stricter immigration policies that affected an estimated 12 million unauthorized immigrants, 40% of whom are hired as farm workers (Seid, 2006; and Levine, 2004).

According to the Pew Hispanic Center, there were about 12 million undocumented immigrants in the U.S. in 2005, with the states of California, Texas, Illinois, New York and parts of the Southeast registering higher levels of concentration. The recent stricter implementation of immigration laws on the federal and state levels led to a record number of deportations of 400,000 accomplished during the 2011 fiscal year alone (Barnett, 2011). The number of illegal migrations to the U.S. declined, however, by 67% from 2005 to 2009.

The exodus of illegal immigrants who vacated farm work positions could have been the best coincidental remedy to the serious unemployment conditions during these recessionary times. However, some recent evidence suggests that the availability of vacated farm positions did not really help ease the unemployment situation. A previous SARE-funded study (Santos and Escalante, 2010) established the vulnerability of organic farms in the Southeast to fluctuations in the supply of such seasonal farm labor. Some producer-participants disclosed frustrations and disappointments in attracting potential farm workers available locally who either shunned away from certain demanding, more strenuous farm work or provided below par (low productivity) work performance even when offered/paid attractive wage rates.

This claim is further corroborated by other sources, such as a news release (Burke, 2010) detailing farmers' complaints about the difficulty of finding domestic workers who can help them with farm work. A Nevada farmer, for instance, has spent about \$3,000 in advertising and recruitment through newspapers and electronic job registry to look for domestic workers who can help him trim his strawberry plants for six weeks last summer. He had no takers, in spite of his recruitment efforts.

An interesting thing about the Nevada farmer's case is that he was willing to offer \$10.25 per hour for the job. This is the same predicament that a South Georgia organic blueberry farmer was in when she was looking for workers to help her harvest the ripe

blueberries (Santos and Escalante, 2010). Prospective workers ignored her offer, even if she was willing to pay beyond the prevailing farm wage rates at that time, as domestic workers are turned off by the idea of spending significant time under the summer heat and the menial nature of the job. A few brave ones showed up and ended up working only for a very short time. The productivity of these workers has been dismally below the usual productivity realized from those that illegal foreign workers could accomplish. The organic farm eventually lost a lot of its investments in its blueberry plantation as a substantial portion of the crop was left to rot in the fields, in the absence of enough workers to salvage them from being written off.

Hiring and Coping Strategies of Organic and Conventional Farms

A survey was conducted in late 2007 among organic and conventional farms in Georgia, North Carolina, South Carolina, Alabama, and Mississippi to look into farmers' experiences in hiring nonfamily seasonal farm workers (Santos and Escalante, 2010). A total of 523 potential survey participants were identified through online farm directories and from contacts with organic farming associations, commodity groups and local USDA agencies. Of these farms, 83 responses were received, representing a response rate of 16%. The responses to the hiring difficulty question are summarized in table 1 (Santos and Escalante, 2010).

Table 1. Level of Hiring Difficulties, by Farm Type.						
Responses	Conventional Farms		Organic Farms		Total	
	Number	% of Farm Category	Number	% of Farm Category	Number	% of All
Never	10	27.78	12	32.43	22	30.14
Sometimes	12	33.33	11	29.73	23	31.51
Most of the time	8	22.22	6	16.22	14	19.18
Always	4	11.11	8	21.62	12	16.44
No Answer	2	5.56	0	0	3	2.74
Total	36	100	37	100	73	100

Source: Santos and Escalante, 2010.

Based on the results summarized in table 1, 28% of the sample conventional farms never experienced any difficulty in hiring workers to complement their existing family farm labor. The comparative proportion for organic farms is quite close at 32%.

Sixty-seven percent (67%) of both conventional and organic farms declared that they had experiences of difficulty in hiring such workers, with the severity of the problem ranging from periodic ("sometimes") to constant ("always") frequencies. In both farm groups and in these three categories with experiences of difficulty ("sometimes" to "always"), the periodic ("sometimes") difficulty category comprises about 30% to 33% of the respondents in their respective farm types.

The survey also asked the farmers about their preferences for specific business strategies to cope with an impending gap in the seasonal farm labor supply. The most popular business strategy for conventional farms (18.57%) considers an input substitution scheme where more machinery will be acquired to reduce labor requirements in the event of a farm labor hiring (or shortage) problem. This perhaps reflects the conventional farms' more mechanized (machine-dependent) existing operations that made them more familiar with this strategy. Conventional farms in this sample have been in business operation much longer than the more newly established organic farms. Farm experience and greater financial flexibility (resulting likely from their size and scale of operations) provide these farms then with the capability to consider more capital investments.

The respondents in this farm category also considered downsizing of farm operations as the second most popular strategy (17.14%). This is a logical result considering that conventional farmers usually operate much larger operations (*vis-à-vis* their organic counterparts) and, thus, can consider size adjustments to achieve the right combination of minimized inputs and optimized farm production.

On the other hand, the most popular strategy for organic farms is production diversification (i.e. changing production plans to less labor-intensive commodities). Organic farms are structurally more diversified as their farms are usually planted to various types of fruits and vegetables. The need for regular crop rotation practices to enhance soil productivity expose these farmers to various production (or crop choice) options. Both organic and conventional farms also consider relying on family members to increase their participation in the farm business when extra help from non-family workers cannot be obtained.

The H2A Visa Recourse

A glaring omission in the farmers' responses of coping strategies was the H2A hiring alternative. The federal government's H2A Agricultural Guest Worker Program is actually the farmer's legal recourse in hiring foreign farm workers. It allows U.S. farmers

to temporarily hire nonimmigrant foreign workers to perform full-time temporary or seasonal farm work when domestic workers are unavailable (US GAO, 1997). H2A employment is governed by a number of regulations that are designed to protect the interests of the foreign laborers as well as ensure that such employment decisions do not deprive any able, qualified domestic workers of an employment opportunity, especially nowadays when the economy is struggling with worsening unemployment conditions. To protect the foreign workers from abusive employers, the H2A program sets wage requirements as well as minimum standards for the provision of housing, transportation, meals, workers' compensation, and other benefits (Mayer, CRS Report to Congress, 2008).

The H-2A worker program permits agricultural employers to bring in temporary non-resident alien workers for agricultural employment if the employer can show that sufficient domestic (U.S.) workers are not available for employment needs, and if the employer can show that the employment of H-2A program workers will not adversely affect domestic workers. The H-2A imposes special conditions on agricultural employers that are distinctive from other employment situations.

The protection provisions intended to ensure no displacement of domestic workers have recently been amended. One of the changes now requires farm employers to provide documented evidence of their efforts to seek out qualified domestic workers to fill in the positions they wanted to fill in with H2A workers. In the past, farm employers merely had to indicate that they had tried looking for qualified domestic workers. The program amendments now require farmers to list their job openings on a new online job registry (Farmworker Justice, 2010). The Department of Homeland Security will not approve H2A applications without a certification from the Department of Labor confirming the lack of U.S. workers able, willing, qualified and available to perform the specific job at the time needed (Farmworker Justice, 2010).

The amended H2A program guidelines also have recalled the 50% rule, which states that if a domestic worker becomes interested and qualifies for the position held by the hired H2A worker before the H2A work contract with the foreign worker reaches half of its duration, the contract with the existing H2A worker will be terminated to give way to the domestic applicant.

Other amendments in the H2A program also seem to further protect prospective H2A workers' interests. For instance, H2A employers are now required to list all tasks that the H2A workers are expected to perform while state work-force agencies inspect worker housing facilities before H2A hiring commences (Souza, 2010). Then there is the important amendment on the determination of wage rates (Souza, 2010). Previously, H2A wage determination was based on DOL's Occupational Employment Statistics Survey, which was introduced during the Bush administration and reduced farm wages by an average of \$1/hour (DOL). The amended H2A program now uses the Adverse Effect

Wage Rate Index developed by the Department of Agriculture. The new formula ensures that the wages received by U.S. workers in the same occupation working for the same employer are not below those paid to the H2A workers. However, experts still contend that the new formula actually result in higher H2A wages that, as Ron Gaskill of the American Farm Bureau predicts, could put H2A employers in a less competitive position and out of the program (Stallman, 2010).

H-2A Program Requirements

In addition to the two requirements for recruiting H-2A workers presented previously, several other special conditions are imposed on employers. These conditions apply to all workers employed under the terms of an H-2A contract, whether they are U.S. citizens or nationals, lawful permanent residents (resident aliens), non-resident aliens or workers admitted temporarily under an H-2A visa.

Employers must attempt to recruit domestic workers before they apply for authorization to recruit workers under an H-2A contract. The H-2A contract requires that the employer pay all workers equally for the same work. Pay must at least equal the Adverse Effect Wage Rate (AEWR) currently in effect for H-2A program workers in the state of employment (United States Department of Labor Employment Training Administration, 2012). The AEWR for the States of Alabama, Georgia and South Carolina for 2012 is \$9.39 per hour. The 2012 AEWR for Florida is \$9.54 per hour. Wages paid to workers employed under an H-2A contract are not subject FICA taxes, income taxes or unemployment taxes. Workers recruited under an H-2A contract are guaranteed payment for a minimum of 75% of the work hours stated in the contract, unless dismissed for cause. If a qualified domestic worker seeks employment for H-2A contract work after the contract period has begun, the employer must employ the domestic worker if application is made during the first half of the contract period.

Unlike other agricultural labor situations, employers hiring workers under an H-2A contract are required to provide Worker's Compensation Insurance for the H-2A workers. Employers are also required to furnish transportation at no cost to workers recruited to work under an H-2A contract. Transportation must also be provided to workers who are not daily commuters. In the United States, the majority of H-2A program workers come into the United States from Mexico and Central American Countries. Regardless of the location of the worker's home, the employer is required to pay the transportation and administrative costs of bringing workers to the work place, and of returning workers to their homes at the end of the contract period. The employer must also provide free transportation between the "base of operations" and all work sites covered by the contract.

Employers have a choice with regard to meals for H-2A workers. The employer may provide prepared meals to workers and charge each worker up to \$10.94 per day for those meals. The employer also may choose to provide kitchen facilities associated with housing facilities, and allow the workers to choose and prepare their own meals. In this situation, the workers are responsible for the cost of meal ingredients, but the employer must provide free transportation to permit workers to shop for ingredients.

(Please see Appendices A and B for more details on all current labor laws and regulations affecting agricultural firms, and information on wages, unemployment taxes and worker's compensation insurance.)

Migrant and Seasonal Workers

Migrant and seasonal workers are used by farm operators to provide additional manpower during peak labor need time periods. These workers are often employed in labor intensive agricultural enterprises including the planting and harvesting of fruits, vegetables and tobacco. The Migrant and Seasonal Worker Protection Act (MSPA) is the primary federal law governing the employment and related issues of these workers.

Migrant and seasonal workers are often recruited and made available to farm operators by independent Farm Labor Contractors. Farm labor contractors are required by MSPA to be licensed by the U.S. Department of Labor. Under MSPA, the farm labor contractor and the farm operator engaging the contractor and his or her workers are considered to be joint employers of the workers provided. If the farm labor contractor fails to discharge any required duties as employer (such as depositing payroll taxes), MSPA permits the appropriate federal agency to hold the farm operator at the time of the delinquency accountable.

Wages

Workers covered by MSPA are required to be paid at a rate at least equal to the federal minimum wage. The minimum wage is computed on an hourly basis, but many migrant and seasonal workers are paid on a piece-rate basis. To ensure that the workers receive at least federal minimum wage, the time worked by each employee must be recorded daily, along with the amount earned, regardless of the method of computing the wages actually paid.

Transportation and Housing of Workers

Farm labor contractors frequently own vehicles which are used to transport workers on and between jobs. Vehicles used to transport migrant seasonal workers must pass an

annual safety inspection and if owned by the farm labor contractor, listed on the contractor's federal license by VIN. Drivers of such vehicles are required to be properly licensed for the vehicle they drive, and the owner of the vehicle is required to have liability insurance coverage on each vehicle. The minimum permitted coverage is \$100,000 per vehicle seat, up to a maximum of \$5,000,000 for any one vehicle.

If housing is provided for migrant and seasonal workers, MSPA requires the housing units to be inspected and approved prior to being occupied by workers. For both transportation and housing, the joint employer provisions of MSPA apply if the farm operator has any involvement in obtaining or providing transportation or housing.

Labor Focus on the Georgia Fresh Fruit and Vegetable Industry

The Georgia fruits and vegetable sector is dynamic and growing - from \$600 million to \$1.2 billion in the past decade. Fresh produce products are perishable and most are hand-picked. They require a large amount of human resources for harvesting and packaging on a timely manner prior to shipment to various destinations nationally and internationally. Although five of the eight commodity groups in Georgia experienced decreases in farm gate value in 2009, the fruits and nuts industry exhibited the highest growth rate in terms of percentage gain (36.8%). The two fruit crops responsible for this exponential growth were pecan with 35.8% increase and blueberries with 68.2% in farm gate values respectively.

Even though this growth is expected to continue into 2012, one of the major problems facing the Georgia fruits and nut industry is the 2011 immigration law known as the HB-87, which Governor Nathan Deal of Georgia enacted into law on May 13, 2011. The Georgia legislators did not succumb to the fierce pressure mounted by the Georgia Fruits and Vegetable Growers Association to block this into law. This new law actually penalizes transporters and harborers of illegal immigrants. In addition it provides police officers the right to investigate the status of suspected immigrants without identification and it requires growers to utilize e-verification prior to hiring anyone. Reports in Georgia show labor shortages up by almost 50% in this \$1.2 billion fruits and vegetable industry which fruits and nuts alone contribute slightly over 33%. This shortage could translate to over \$300 million in combined fruit and vegetable crop losses or \$100 million for the fruits and nuts industry alone if no corrective measures are implemented to minimize this expected loss.

A baseline forecasts study for horticultural production depicted that the combined value for fruits, vegetables and nursery/greenhouse produce will attain close to \$70 billion in 2016 (ERS/USDA, 2006). The report depicted that each of these entities that

together make up the horticultural industry will contribute close to \$20 billion farm gate value in 2012.

From 1999 to present, the U.S. import and export of agricultural products have been increasing steadily even though exports have consistently exceeded imports. The gap between exports and imports was exacerbated from 2006-2009. Due to this consistent increase in export against imports, the United States enjoyed favorable trade balances during this time (ERS & FSA/USDA, 2008). The weak U.S. dollar, increasing food demand in emerging markets and the successful partnership with NAFTA regions boosted U.S. export for fruit and vegetables (Dohlman and Gehlhar, 2007). Despite the increase in the U.S. agricultural trade and positive trade balances, the picture is totally different when compared to the vegetable industry specifically and where although both exports and imports are consistently increasing, the U.S. is actually importing more than exporting (Lucier et al., 2011).

From 1995 – 2007 the U.S. per capita consumption of fruits and vegetables were above 700 pounds - per capita consumption of vegetables was slightly above 400 pounds while fruits were below 400 pounds. The dynamics changed from 2008 to 2012, as a drastic decrease in consumption of both fruits and vegetables occurred. Overall per capita vegetable consumption decreased from as high as 448 pounds in 2004 to 390 pounds in 2012. A similar trend was observed with fruit as per capita use also decreased from 286 pounds in 2004 to 264 pounds and 269 pounds in 2008 and 2009 respectively (Lucier et al., 2011; and Lucier et al., 2006). Thus, the data shows that despite the health attributes and various nutritional and school lunch programs, Americans are eating less fruits and vegetables now that they did a decade ago. Although vegetable harvested area decreased in 2011 to 5,716 million acres from 6,969 million acres in 2010, it is forecasted that total harvested area will increase by almost 22% equivalent to 6,718 million acres in 2012 (Lucier et al., 2011).

The index of prices (1990-92 = 100) received by fruits and tree nuts farmers has also shown a continuous growth from 2009 to 2011. The farmers price index started from 120 in Jan 2009 to a high of 150 in November while in Jan 2011, the index started from 150 to a peak of 180 in November (Lucier et al., 2011).

The state of Georgia commercially grows over a dozen fresh fruits and vegetables generating over \$1.2 billion in farm-gate value. In 2009, 161,959 vegetable acres were harvested with a farm gate value was \$916 million. During the same time period, the fruits and nuts farm gate value was \$366 million (Boatright and McKissick, 2011). Pecans are still leading the Georgia fruits and nuts industry, generating 47% of total farm gate value, while blueberries have been positioned as the runner up with 28% followed by peaches with 16%.

Most of the vegetable and fruits produced in Georgia and around the country are handpicked. The latest labor issues in Georgia and other states are not helping with the

economic efficiency of produce production. Some commodities have partially adopted mechanical harvesters. The National Raisin Industry is 45% mechanized in just a decade. The Florida and National Processing Orange Industry is still awaiting approval of a chemical needed for ripening from the U.S. Environmental Protection Agency to go mechanical. The baby leaf lettuce crop is 70-80% mechanically harvested. Certain vegetable producers are likely to lose market share to imports as labor costs rise, unless there is a major breakthrough in labor-saving mechanization. Agricultural cannibalism will gradually start creeping in as the bigger growers with financial capabilities to purchase the very expensive machine harvesters will consequently start buying off the smaller and limited resource farmers unable to keep up with the new and expensive technology needed for their survival.

Labor Focus on the Georgia Environmental Horticulture Industry

Research on the economic and social impacts of the immigrant labor on the Georgia environmental horticulture industry (also known as the 'green industry') was conducted via a survey by horticultural and agricultural economics faculty who are participants in the Green Industry Research Consortium. The survey focused on the container- and field-grown production nurseries. Their final results are forthcoming in a Southern Cooperative Series Bulletin. Some of the survey highlights for Georgia follow.

In describing the demographics of the labor force for the environmental horticulture industry, 38% of the survey respondents were women and 62% men. The greatest number of workers had previously labored in the nursery industry from one to five years (33.5%). New workers, laboring less than a year (22.7%) and more experienced workers, laboring 6-10 years (20.8%) constituted one-fifth of the labor force each. There were 14.5% very experienced workers, laboring greater than 15 years and the remainder had labored for 11 to 15 years. New workers in the nursery industry were fewer than those reported for other agricultural crops.

Seventy-three percent of the survey respondents were general laborers, 14.3% crew leaders, and 12.7% were 'other.' Respondents specifying 'other' as their job classification further specified their jobs as involved in sales (15%), customer services (18%), managing production operations (20%), managers (11%), supervisors and administrative (14%) and nonspecified (22%) These values conformed to earlier research (Hodges, Hall, and Palma, 2011).

Seventy percent of the survey's respondents were born outside the United States - 57% in Mexico. Other countries cited included Honduras, Guatemala, Nicaragua, Cuba, Haiti, and the Dominican Republic. The primary language spoken at work by survey respondents was Spanish (63%), followed by English (30%). Only 5% of the workers

indicated an ability to speak both Spanish and English, and a very few individuals indicated they could speak Portuguese or Mixteco.

Overall, 42% of those surveyed had completed high school, 26% had completed middle school, and 12% had completed at least a certificate or an associate college degree. Men and women nursery workers had the same number of year of formal education. Despite 77% of the workers indicating an interest in training via a course or class, only 70% had received any training during work with their current employer. The lack of Hispanic employee training could be linked to cost. The topic receiving highest ratings of interest for employee training was English-Spanish language classes.

References

- Barnett, J. 2011. (2011, October 18). "U.S. deportations reach historic levels." *CNN U.S.* Online. Available at http://articles.cnn.com/2011-10-18/us/us_immigrant-deportations_1_removals-deportations-effective-immigration-enforcement?_s=PM:US [Retrieved December 2011].
- Berman, J. (2011, October 5). "Georgia Immigration Law Could Have Dire Consequences For State's Economy." *Huffington Post*. Online. Available at http://www.huffingtonpost.com/2011/10/05/georgia-immigration-law-economy_n_995889.html. [Retrieved December 12, 2011].
- Boatright, R. and J. McKissick (2011). "2010 Georgia Farm Gate Report". The University of Georgia, Center for Agribusiness and Economic Development. www.caed.uga.edu Accessed February 9, 2012.
- Burke, G. (2010). "Despite economy, Americans don't want farm work." *Associated Press*. Online. Available at http://news.yahoo.com/s/ap/us_immigration_jobs/ [Retrieved September 27, 2010].
- Congressional Research Service (1997, November 21). *Central American Asylum Seekers: Impact of 1996 Immigration Law*. Congressional Research Service, Washington, D.C.
- Dohlman, E. and M. Gehlhar (2007). "U.S. Trade Growth: A New Beginning or a Repeat of the Past"? *Amber Waves*, USDA/ERS (September 2007). Also see: <http://www.ers.usda.gov/AmberWaves/September07/Features/USTrade.htm>
- Escalante, Cesar and Forrest Stegelin (2012). "Georgia's Farm Labor." 2012 Georgia Ag Forecast. Department of Agricultural and Applied Economics, College of Agriculture and Environmental Sciences, University of Georgia, pg. 29, January 2012.
- Farmworker Justice.(2010). "H-2A Guestworker Program." *Farmworker Justice*. Online. Available at <http://www.fwjjustice.org/guestworker-programs/h-2a> [Retrieved December 12, 2011].
- Fonsah, E.G. (2012). "Labor Situation and Outlook: Fruits and Vegetables" *2011 Georgia Ag Forecast*. Department of Agriculture and Applied Economics, College of Agriculture and Environmental Sciences, University of Georgia, pg. 28. www.GeorgiaAgForecast.com
- Georgia Department of Revenue (2011). *Wage and Hour Reporting: Form G-4*. December 2011.
- Gomez, A. (2011, April 21). "State immigration bills meet mixed fates." *USA Today*. Online. Available at <http://www.usatoday.com/news/washington/2011-04-21-states-illegal-immigration-laws>. [Retrieved December 12, 2011].

- Hodges, Alan W., Charles R. Hall, and Marco A. Palma (2011). *Economic Contributions of the Green Industry in the United States, 2007*. ISBN 58161-415-2. Southern Cooperative Series Bulletin #413, May 2011.
- Levine, L. (2004 February). *Farm Labor Shortages and Immigration Policy*. Congressional Research Service, Washington, D.C. Unnumbered special publication. February 2004.
- Lucier, G., S. Thurnsbury, L. Glaser, and A. Jerardo (2011). "Vegetable & Melons Outlook" ERS/USDA VGS-348/December 15.
- Lucier, G., S. Pollack, M. Ali, and A. Perez (2006). "U.S. Top 5 per Capita Consumption Fruits and Vegetables" ERS/USDA "Fruit and Vegetable Backgrounder"/VGS-313-01, pg. 1.
- Mayer, G. (2008). *Temporary Farm Labor: The H-2A Program and the U.S. Department of Labor's Proposed Changes in the Adverse Effect Wage Rate (AEWR)*. RL 34739, Congressional Research Service, Washington, D.C.
- McKissick, J.C. and S.P. Kane (2011). "Evaluation of Direct and Indirect Economic Losses Incurred by Georgia Fruit and Vegetable Producers in Spring 2011". The University of Georgia, *CAED Report: CR-11-02*.
- Santos, F.I. and C.L. Escalante. (2010, January). *Farmers' Business Expectations and Strategies Under Immigration-Related Changes in Farm Labor Market Conditions: A Survey of Southeastern Organic and Conventional Farm Businesses*. AGECON-10-002. Department of Agricultural and Applied Economics, University of Georgia.
- Seid, J. (2006, April 28). "Immigration reform could cost you." *CNN Money*. Online. Available at http://money.cnn.com/2006/04/28/smbusiness/immigration_reform_prices/index.htm [Retrieved September 2007].
- Smith, L. H.R. 2164: (2011, June 23). *Legal Workforce Act*. GovTrack. U.S. Online. Available at <http://www.govtrack.us/congress/bill.xpd?bill=h112-2164>. [Retrieved December 27, 2011].
- Souza, C. (2010). "Farmers say new H-2A rule adds cost, complexity." *California Farm Bureau Federation*. Online. Available at <http://cfbf.info/agalert/AgAlertStory/> [Retrieved May 27, 2010].
- Stallman, R. (2010). "New H-2A regulations will make it harder to put food on America's tables." *Natural Resource Report*. Online. Available at <http://naturalresourcereport.com/2010/02/new-h-2a-worker-visa-regulations-rile-farmers/> [Retrieved May 17, 2010].
- Traub, A.M. (2007). *2007 Edition: Principles for an Immigration Policy to Strengthen and Expand the American Middle Class*, Drum Major Institute for Public Policy, Washington, D.C.
- Turner, D. (2011, December 26). "New GA laws in effect next week." *Athens Banner Herald*. Online. Available at <http://onlineathens.com/local-news/2011-12-26/new-ga-laws-effect-next-week>. [Retrieved December 27, 2011].
- United States Department of Agriculture Economic Research Service (November 2011). *Rural Labor and Education: Farm Labor*. Online. Available at <http://ers.usda.gov/Briefing/LaborAndEducation/FarmLabor.html> [Retrieved February 17, 2012].
- United States Department of Agriculture Economic Research Service and Foreign Agricultural Service (2008). "Outlook for U.S. Agricultural Trade" AES-59. *Electronic Outlook from ERS & FAS/USDA*. www.ers.usda.gov Accessed February 9, 2012.

- United States Department of Homeland Security - Citizenship and Immigration Services (2009). *Handbook for Employees*. Publication M-274.
- United States Department of Homeland Security - Citizenship and Immigration Services (b) (2009). *Form I-9, Employment Eligibility Verification*.
- United States Department of Homeland Security - Citizenship and Immigration Services (2012), *H-2A Temporary Agricultural Workers*. January 17, 2012.
- United States Department of Labor Employment Training Administration (2012). *2012 Adverse Effect Wage Rates*.
- United States Department of Labor - Wage and Hour Division (2008). *Agricultural Employers Under the Fair Labor Standards Act*. Fact Sheet #12, July 2008.
- United States Department of Labor - Wage and Hour Division (2008). *Joint Employment and Independent Contractors Under the Migrant and Seasonal Worker Protection Act*. Fact Sheet #35, July 2008.
- United States Department of Labor - Wage and Hour Division (2008). *The Migrant and Seasonal Worker Protection Act*. Fact Sheet #49, July 2008.
- United States Department of Labor - Wage and Hour Division (2008). *Transportation Under the Migrant and Seasonal Worker Protection Act*. Fact Sheet #50, July 2008.
- United States Department of Labor - Wage and Hour Division (2010). *Section H-2A of the Immigration and Nationality Act (INA)*. Fact Sheet #26, February 2010.
- United States Department of Treasury Internal Revenue Service (2012). *Circular A, Agricultural Employer's Guide*. Publication 51, January 18, 2012.
- United States General Accounting Office (GAO). (1997). *H-2A Agricultural Guestworker Program: Changes Could Improve Services to Employers and Better Protect Workers*. GAO/HEHS-98-20. Report to Congressional Committees, Washington, D.C.

APPENDIX A:

Current Labor Laws and Regulations: Applications to and Impacts on Agricultural Firms

Who are Employees?

In agriculture, employees include workers who:

- Raise livestock, bees, fur-bearing animals, or poultry;
- Cultivate the soil, grow, or harvest crops;
- Grow or harvest crops as the employees of a contractor;
- As employees of either the farmer or an independent contractor, do work on the farm; which is incidental to the farming operations of the farm; or
- As employees of the farmer, do work off the farm which is incidental to the farming operations of the farm (U.S. Department of Treasury Publication 51, 2012).

Hiring Employees – Paperwork

Hiring requirements for agricultural employees are no different than those for any other employment position. Compliance with federal employment laws and regulations requires documentation of three basic practices.

- Verification of employment eligibility
- Determination of employee income tax withholding allowances
- New-hire reporting to the state for the purposes of enhancing child-support order enforcement and reducing Food Stamp, Medicaid and other entitlement benefits fraud.

Verification of Employment Eligibility

The Immigration Reform and Control Act of 1986 (IRCA) requires employers to verify the identity and employment authorization of workers. U.S. Citizenship and Immigration Services (USCIS) Form I-9 is used by employers and workers to document worker identity and employment authorization. Form I-9 is divided into two sections.

Section 1 of Form I-9 is completed by the employee at the time of hiring. In completing and signing section 1, the employee is attesting that he or she is a U.S. citizen or national, a lawful permanent resident (resident alien) or a non-resident alien with a valid temporary work authorization. The employee also attests by signing that he or she understands under penalty of perjury the penalties associated with providing and attesting

to any false information. If a third party assists the employee in any way with understanding and completing section 1 of Form I-9, that individual must also sign section 1, and is subject to the same penalty of perjury stipulations as the employee (Department of Homeland Security (b), 2009).

Section 2 of Form I-9 is completed by the employer or a third party agent engaged by the employer. Section 2 requires the inspection of *original documents* submitted by the employee to establish his or her identity and employment authorization. Form I-9 and the Handbook for Employers (USCIS pub. M-274) divides authorized documents into three lists.

List A documents establish both the identity and employment authorization of a worker. These documents include, *but are not limited to*, U.S. Passports and Passport cards, Department of Homeland Security (DHS) Permanent Resident Card (Form I-551), Foreign Passports with a DHS I-551 stamp and machine-readable immigrant visas (MRIV) with a temporary I-551 notation.

List B documents establish only worker identity. Approved documents include driver's licenses and ID cards issued by a state or outlying possession of the United States, providing the document includes a photograph or information such as name, date of birth, gender, height, eye color and address. Other approved documents include, *but are not limited to*, School ID cards (with photograph), Voter's registration card, U.S. military and military dependent ID cards, and Driver's licenses issued by a Canadian government authority. For persons under age 18 unable to produce a document of the nature of those listed above, school or day-care records or report cards and clinic, doctor or hospital records are approved.

List C documents are those that establish employment authorization only. Approved documents include U.S. Social Security account number cards and original and certified copies of birth certificates issued by a government authority within the United States or outlying possessions that bear an official seal. Other approved documents include, *but are not limited to*, Native American tribal documents, USCIS Forms I-179 (Identification Card for Use of Resident Citizen in the United States) and I-197 (U.S. Citizen Identification Card), U.S. Department of State Forms FS-545 (Certification of Birth Abroad) and DS-1350 (Certification of Report of Birth), and employment authorization documents issued by the Department of Homeland Security that are not included under List A.

The worker is required to present either one approved document from List A or one approved document from List B *and* one approved document from List C within 3 business days of the date employment begins. All documents must be unexpired. All documents presented must be originals (or a certified copy in for a birth certificate). Other than exceptions provided for in Form I-9 and publication M-274, photo-reproductions of documents are not acceptable. Metallic reproductions of documents

(such as metallic reproductions of Social Security account number cards) are not acceptable. No document is acceptable if it has been laminated.

Employers are required to accept any approved document or combination of documents presented by an employee that appear on their face to be genuine and to relate to the person presenting them. The employer has no right to specify which approved documents will be accepted. To do otherwise could be an unfair immigration-related employment practice in violation of the anti-discrimination provision of the Immigration and Naturalization Act (INA). Furthermore, so long as a List B or C document is not expired when presented, the fact that there is a future expiration date has no bearing on the worker's current or future employment eligibility.

Form I-9 is not filed with any government agency. Employers are required to retain each employee's Form I-9 in their files for the greater of three years or one year past the date when the worker's employment ceases.

Electronic Employment Eligibility Verification

The Electronic Employment Eligibility Verification (E-Verify) program is a free program offered by the Department of Homeland Security. The program offers quick verification of worker identity and employment authorization submitted by the employer to DHS. The program required employers to sign a Memorandum of Understanding prior to participation, and to go through an online tutorial program prior to receiving an E-Verify account number. E-Verify checks the worker identity/employment authorization information input by the employer against a government data base. If E-Verify is used by an employer it must be used for all hires, and must be done within 3 days of the date of employment. If the information input by an employer for a worker does not match DHS information, a *tentative non verification* notice will be sent to the employer. Tentative non-verification means only that the information submitted in the form it was submitted, does not match DHS information. Tentative non-verification can result from input errors, name differences (middle initial v. full middle name or unrecorded marital name changes), or other innocent differences. If a tentative non-verification is received by an employer, it is not grounds for the discharge of the employee. An employee may only be discharged based on E-Verify issuance of a *final* non-verification notice, or after a 10-day period in which no further information has been received to reverse the tentative non-verification notice.

Determination of Employment Income Tax Withholding Allowances

Cash wages paid to agricultural workers are subject to federal income tax withholding if they are subject to FICA taxes. An agricultural employee's compensation is subject to FICA taxes, and therefore, federal income tax withholding if either of two tests are met:

1. The worker is paid cash wages \$150 or more during the year by the employer, regardless of the method of computing wages, or
2. The employer's total amount paid (in either cash or non-cash compensation) to all workers during the year is \$2,500 or more (Department of Treasury Publication 51, 2012).

These tests do not apply to workers who receive less than \$150 in cash wages during the year from the employer if the worker is engaged in hand-harvest labor and paid on a piece-rate basis (piece-rate payment must be common practice in region), commutes from his or her home on a daily basis, and worked less than 13 weeks in agricultural labor in the prior year. The amounts paid to these exempt workers are included in determining the total compensation paid by the employer for the year for the purposes of the \$2,500 test.

If it is determined that the employee's wages are subject to FICA taxes, and therefore subject to federal income tax withholding, the employer must provide and the employee must complete Form W-4 (Employee's Withholding Allowance Certificate). Form W-4 is used by the employee to notify the employer of his or her marital status and the number of withholding allowances the worker is entitled to and chooses to claim. If Form W-4 is provided to an employee and not returned to the employer by the first payday, the employer is required to act as if the employee had returned the Form W-4 showing the Single tax filing status and claimed Zero (0) withholding allowances. This combination of filing status and withholding allowances results in the maximum permitted amount to be withheld from the worker's paycheck for the payment of federal income tax.

Withholding of state income tax from agricultural employee wages is an issue of state law. Georgia does not require Georgia income tax to be withheld from the wages of agricultural workers. Georgia income tax may be withheld from an agricultural worker's wages at the request of the worker. Georgia Form G-4 is used to report an employee's marital status and withholding allowances for the purpose of withholding Georgia income tax from the worker's wages (Georgia Department of Revenue, 2011).

New Hire Reporting

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) required the creation in each state of a Directory of New Hires and a National Directory of New Hires for the purpose of ensuring collection of certain court-ordered payments from worker wages and to prevent erroneous receipt of public assistance payments. Federal law requires new hire reporting to be done through the states. Federal regulations require reporting of the employer's name, address and FEIN, and the employee's name address and SSN. Federal rules allow 20 days from the date of hire for this reporting. Since the reporting is done through the state in which the worker is employed, states are permitted to establish their own reporting requirements, as long as they not less stringent than the Federal requirement. The Georgia New-Hire reporting program follows the federal guidelines, with the exception of requiring new hires to be reported within 10 days of the date of hire. The Georgia New-Hire reporting program is an electronic program. Program registration and new-hire report submissions are accomplished online at: <http://www.ga-newhire.com>.

APPENDIX B:**Wages, Unemployment Taxes and Worker's Compensation Insurance***Wages*

The Federal Minimum Wage was created as a part of the Fair Labor Standards Act of 1938. Since July 24, 2009 the Federal minimum wage has been set at \$7.25 per hour. Individual states may establish different minimum wages. The State of Georgia has conformed to the Federal minimum wage since January 1, 2008 (U.S. Department of Labor, 2008).

Wages paid to agricultural workers are subject to the minimum wage if the "500 man-day rule" applies to the employer. Agricultural employers are required to pay at least minimum wage if they employ more than 500 man-days of farm labor in any calendar quarter of the preceding year [a man-day is one employee working for at least one hour in one day]. Wages paid to agricultural workers are exempt from overtime pay under the Fair Labor Standards Act.

Unemployment Taxes

In agriculture, an employer is required to pay unemployment tax if either of two events occurs:

1. 10 or more workers are employed on any single day in 20 or more weeks during the calendar year, or
2. The employer's gross payroll is at least \$20,000 in any calendar quarter of the current or prior calendar year.

There are both Federal and State unemployment insurance taxes. The Federal unemployment tax (FUTA) is assessed on the first \$7,000 of wages paid to each employee during the calendar year. The current FUTA tax rate is 6.0%. If an employer also participates in his or her State unemployment insurance program, a credit of 5.4% is given to the employer, regardless of the actual State unemployment tax (SUTA) rate. In Georgia the base SUTA tax rate is 2.7% of the first \$8,500 of subject wages paid to each employee during the calendar year. Georgia employers benefit from participation in the Georgia unemployment tax insurance program by receiving a 5.4% credit against their computed FUTA tax for paying a 2.7% SUTA tax.

Worker's Compensation Insurance

Worker's compensation insurance is governed by the laws of the individual states. Worker's compensation insurance provides wage replacement and medical benefits to employees injured in the course of their occupation, in exchange for employees giving up their right to sue for tort negligence. Participation in a Worker's compensation insurance program provides an employer security against tort actions which might result from employee injury related tort actions, and provided employees with a guaranteed level of wage replacement and medical benefits for on-the-job injuries. An increasing number of states have legislated the participation of agricultural employers in worker's compensation insurance programs, but Georgia is not among these states at this time. Agricultural employers are eligible to participate in Worker's compensation programs even if they are not required to participate in them.