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Farm labor management trends in Florida, USA – challenges and opportunities

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ABSTRACT

Reliance on foreign guest workers, rising minimum wages, and corporate social responsibility are three trends emerging within the Florida agricultural economy, particularly among labor-intensive specialty crop farms. These trends are creating higher costs and pushing employers into new management relationships with their farmworkers. On one hand, higher costs compromise the competitive position of agricultural operations. On the other hand, new management strategies could increase overall worker productivity, offset some administrative costs associated with labor management, and create new avenues of market access for their products. The success to which agricultural employers adjust to these trends with cost effective management strategies likely will determine their long-term economic success.

KEYWORDS: farmworkers; specialty crops; H-2A; corporate social responsibility; minimum wage

Introduction

The definition of “specialty crops” is enshrined into U.S. law as part of the Specialty Crops Competitiveness Act of 2004 (7 U.S.C. 1621 note) and includes fruits, vegetables, tree nuts, and nursery crops (USDA, 2014). For specialty crop producers in Florida, particularly fruit and vegetable growers, the production and harvest of specialty crops is labor intensive and, hence, they depend on a significant number of seasonal and migrant farmworkers. Specialty crop producers are facing increasing challenges with respect to both the availability and cost of farm labor services. The goal of this paper is to present a comprehensive picture of the farm labor trends as well as discuss potential management options to maintain economic viability of Florida growers. While mechanization of production and harvesting jobs could ultimately resolve many farm labor concerns, at this time those technologies are not commercially available. In the near term, which we define as the next five to ten years, growers still have to rely on hand labor and must adjust and accommodate their labor management practices to secure an adequate supply of workers in a cost-effective manner. Insights gained through this analysis should carry over to other states and production regions facing similar farm labor challenges.

Florida specialty crop growers and their affiliated farm labor contractors face three interrelated trends with respect to farm labor: 1) increasing reliance on foreign guest workers; 2) rising minimum wages; and, 3) evolving supply chain relationships, which require growers to be accountable to the precepts of corporate social responsibility. Each trend, separately and collectively, can be viewed as both a challenge and opportunity to long-term economic sustainability of the state’s agricultural economy. This paper begins with a description of Florida’s specialty crops and historical patterns of farm labor management. We discuss guest workers, minimum wages, and corporate social responsibility separately and at the end of the paper, discuss how these trends are linked and potential ways to mitigate costs and maximize benefits in a changing farm labor market.

Agriculture and farm labor management in Florida

Florida is second only to California in the production of U.S. specialty crops. In 2013, citrus, fresh vegetable, strawberry, and blueberry production combined to deliver \$5 billion of farm gate sales, representing 60% of Florida’s

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total agricultural value (USDA-NASS 2013). Fruit and vegetable growers depend on a significant number of seasonal and migrant farmworkers to grow and harvest their crops. University of Florida crop enterprise budgets estimate that one hectare of fresh market tomatoes requires 500 hours of manual labor, 300 hours during the growing season and another 200 hours to harvest an average marketable yield of 3,500 cartons (11.3 kg) (Van Sickle and McAvoy, 2016). Harvesting one hectare of oranges with an average yield of 1,000 boxes (41 kg) requires more than 120 hours, or two people working six, ten-hour days (Roka and Cook, 1998). A survey of the Florida strawberry industry in 2016 indicated that one hectare of fresh strawberries requires roughly 1,980 hours of manual labor to produce an average of 7,620 flats (3.6 kg), 1,420 hours for harvesting and 560 hours for non-harvesting activities (Guan, 2016). This makes strawberry the most labor intensive crop of all crops grown in Florida. In Southwest Florida alone, growers employ more than 16,000 seasonal and migrant farmworkers during the peak of the agricultural season (Zurn, 2016; Roka and Cook, 1998).

Florida's specialty crop growers in the south and southwest regions begin employing seasonal workers in late August when they prepare fields and start their planting cycles. Winter vegetables and strawberry beds are planted from late August through October. Winter vegetables are harvested from November through the latter part of January. Spring vegetable crops are planted in late January with harvesting in March and April. Strawberry harvesting starts in late November and continues through mid-March. Citrus harvesting begins in late November and lasts until late May (FDACS, 2017).

Seasonal and migrant farmworkers plant, prune, and harvest nearly all fruit and vegetable crops in Florida (NC Farmworker Institute, 2007). The number of seasonal and migrant workers across the state reaches a peak in January and remains steady through March. Migrant workers begin to leave Florida in April, as they follow the crop cycles north into the Carolinas and Mid-Atlantic states. The number of farmworkers continues to decline across Florida as vegetable, berry, and citrus harvesting end by late May (Roka and Cook, 1998).

Until recently, most of the seasonal and migrant farmworkers hired by Florida growers were considered "domestic" workers, although a large percentage of these workers are foreign nationals and work in the United States without legal authorization (Gunderson, Wysocki, and Sterns, 2009; Guan et al., 2015). When hired, these workers present documentation that attest to their identity (i.e. driver's license with picture ID) and authorization to work in the U.S. (i.e. social security card). If the documents appear reasonable, employers are not required to verify their authenticity. Another important feature of the workplace relationship has been that Florida's agricultural employers hired domestic farmworkers on an "at-will" basis. "At-will" employment means that no contractual obligations exist between workers and employers other than to abide by the daily "terms and working conditions" statement (Doyle, 2016). An at-will employer has no obligation to offer the same job or rehire the same worker from one day to the next. Likewise, an at-will worker has no obligation to return to the same employer day after day. Consequently, growers generally have little economic incentive to invest in the training and development of their

domestic seasonal and migrant workforce. Some growers, particularly strawberry growers, recognized the value of on-farm housing as a means to recruit and retain workers (Guan, 2016). Providing housing, however, adds additional layers of government oversight and cost (FDOH, 2018), leading many employers not to invest in on-farm housing. This calculus, however, may be changing.

For a number of years, growers have become increasingly concerned about the availability and legality of their domestic workforce. There is a widespread belief among growers that native-borne Americans are generally not willing to do farm work (Barbassa, 2010). This belief was particularly evident in a 2013 survey of Florida strawberry growers, where it was claimed that a significant portion of their crop was not harvested because the normal number of domestic workers was not available (Guan et al., 2015). In our 2016 survey (Guan, 2016), the average monthly labor shortages growers reported ranged from 14% to 31% over the strawberry season (September through March). Among workers reporting as "domestic," there has been an ongoing concern about their legality. While federal law requires all employers to verify an employee's identity and U.S. work authorization via the I-9 form created by the Immigration Reform and Control Act of 1986, it has been common knowledge that many of these documents are forged (Monty, 2017). More than 50% of the workers interviewed for the National Agricultural Worker Survey (NAWS) self-report that they do not have legal documentation to work in the USA (DOL-ETA, 2014). Data from the Social Security Administration on the number of "miss-matches" between names and social security numbers suggest that the percentage of undocumented agricultural workers may be closer to 70% (Gunderson, Wysocki, and Sterns, 2009). The 2013 survey of strawberry growers suggested that half of the growers in Florida believed undocumented workers account for 90% of the industry's work force. Only one-fifth of the growers interviewed believed that the unauthorized workers were less than 70% (Guan, et al., 2015).

The uncertainty over the number of legal farmworkers and increased efforts by federal agencies to enforce immigration laws encouraged citrus growers in the late 1990s to explore mechanical harvesting systems (Brown, 2005). Between 1999 and 2008, significant efforts were made to mechanize the harvest of sweet oranges for juice processing. Nearly 15,000 hectares were being mechanically harvested annually until a disease known as citrus greening (or HLB) became widespread (Florida Dept of Citrus, 2012). The HLB bacteria impedes the movement of nutrients between a tree's canopy and root system. Any stress, be it mechanical or environmental, accentuates HLB's symptoms and hastens a tree's productive decline. As current mechanical harvesting systems inflict some damage to a tree's branches and leaf canopy, citrus growers quickly curtailed mechanical harvesting as they sought to minimize tree stress and maintain economically viable yield levels.

Efforts to harvest fresh vegetable crops mechanically achieved mixed results as well. Crops such as green beans and potatoes have been fully mechanized from planting through harvest (Roka, 2012). Little advancements, however, have been made with respect to harvesting strawberries and important vegetable crops grown in Florida, including fresh market tomatoes, bell peppers, eggplant, and cucurbits (cucumber, squash, and watermelon).

Robotic harvesting may be the future for these fresh-market vegetables and soft-skin fruits. The strawberry industry in particular has been investing to develop a robotic harvesting system (Rusnak, 2017). Such technology, however, is not yet commercially available and hence, most vegetable, berry, and all citrus growers in Florida will continue to rely on seasonal and migrant farmworkers.

Reliance on foreign guest workers

The agricultural guest worker program, known as H-2A, has been in place for more than 20 years. The United States Department of Labor (DOL) describes the H-2A program as a way for U.S. agricultural employers to legally hire foreign workers to perform temporary/seasonal agricultural jobs (DOL, 2016). The H-2A program is open to a specialty crop employer provided he or she satisfies two conditions: first, the domestic workforce is not sufficient to meet the employer's labor needs; and second, importation of foreign workers will not adversely affect earnings of domestic workers doing similar jobs (DOL, 2016).

Prior to 2010, Florida growers annually hired between five and six thousand H-2A workers (Table 1). Since 2010, the number of Florida H-2A visas certified by the US Department of Labor (DOL) has grown more than four-fold (Table 1). During fiscal year (FY) 2010, the DOL certified Florida employers to bring in 4,510 H-2A workers, or 5.7% of the total H-2A workers certified across the U.S. In FY2016, the certified number of Florida H-2A workers had grown to nearly 23,000 and accounted for 13.8% of the total U.S. H-2A positions. Since 2016 Florida is the largest state by number of H-2A workers and in FY 2017, Florida's number of certified H-2A position rose to more than 25,000 (DOL-ETA, 2017). During FY2012, 84% of the Florida H-2A workers were

hired as citrus harvesters, and by the 2015-16 season, industry experts estimated that H-2A workers harvested 80% of the citrus (Carlton, 2016). While the number of H-2A workers harvesting citrus has steadily increased, the overall percentage of H-2A workers in the citrus industry decreased to 51% during FY2015, reflecting an increasing number of vegetable, blueberry and strawberry growers participating in the guest worker program (DOL-ETA, 2017).

The strawberry industry has seen rapid growth in the number of H-2A workers. In 2013, only one Florida strawberry grower hired less than 200 H-2A workers (Guan et al., 2015). A 2016 survey showed that 20% [3,000 workers] of the strawberry labor force were H-2A workers (Guan, 2016). The number of H-2A workers harvesting strawberries is impressive considering the high fixed costs involved with the application and hiring process and a relatively short harvesting season (Roka, et al., 2017).

Employers complain that the H-2A program is bureaucratically cumbersome, as they must deal with three federal agencies and at least two state agencies to navigate the H-2A hiring process (Roka, 2017a). A 2014 survey of citrus harvesters estimated the pre-employment costs to hire one foreign guest worker to be between \$1,900 and \$2,000 (Roka, Simmitt, and Farnsworth, 2017). The cost to lease bed-space accounts for more than 60% of the pre-employment costs. Petition filing costs, domestic worker advertisement, and H-2A visas are estimated to cost \$350 per certified worker. The remaining costs are associated with travel expenses from the worker's hometown, through the consulate office, and finally to the employer's Florida housing facility (Table 2).

A substantial amount of the pre-employment costs, perhaps as much as \$1,000 per worker, are offset by the amount of payroll taxes an employer does *not* have to pay to foreign guest workers (Table 2). As a numerical example, consider a typical H-2A contract during 2017: 21-week contract period, minimum offered hours of 35 hours per week, and at a minimum wage of \$11.12 per hour. An employer's FICA contributions to a domestic worker are 7.56% of a worker's taxable earnings (IRSa, 2017). Under the contract conditions above, the employer would not have to pay \$620 per foreign worker of FICA taxes that would have to be paid to a similarly employed domestic worker. In addition, state and federal unemployment insurance policies (FUTA) require an employer to pay 6% of the first \$7,000 of a domestic worker's earnings, or \$420 per worker (IRSB, 2017).

As previously mentioned, most domestic farmworkers have been hired on an "at-will" basis. The H-2A program represents a fundamental change in the relationship between employer and farmworker. As opposed to "at-will" workers, H-2A workers are under "contract" with pre-determined start and end dates. Unless an "act-of-God" destroys a crop, or an H-2A worker violates preset performance criteria or a written code of conduct, he or she cannot be terminated before the end date of the contract (Roka, 2017a). Correspondingly, the foreign guest worker is bound to the employer who hired him or her for the duration of the contract. Foreign workers may choose to leave early and return home, but at their own travel expense. The H-2A contract stipulates a minimum number of weekly "offered" hours and a minimum wage,

Table 1: Number of H-2A certified positions by the U.S. Department of Labor, Office of Foreign Labor Certification in the United States and in Florida between FY 2007 and 2016.

Fiscal Year (FY)	US ¹	FL ²	FL%
2007	76,814	5,362	6.9%
2008	82,099	na	na
2009	86,014	5,820	6.6%
2010	79,011	4,510	5.7%
2011	77,246	5,741	7.4%
2012	85,248	6,945	8.1%
2013	98,821	10,051	10.2%
2014	116,689	13,544	11.6%
2015	139,832	17,942	12.8%
2016	165,741	22,828	13.8%
2017 ³	200,049	25,303	12.6%

Sources:

¹ Philip Martin, April 13, 2017. <http://www.epi.org/blog/h-2a-farm-guestworker-program-expanding-rapidly/>. Accessed Aug 23, 2017.

² DOL-ETA. 2011-2016. Annual Performance Data by State – Florida. Office of Foreign Labor Certification. <http://www.foreignlaborcert.doleta.gov/pdf/PerformanceData/>. Accessed Sep 13, 2017.

³ DOL-ETA. 2017. Annual Performance Data by State – Florida. Office of Foreign Labor Certification. https://www.foreignlaborcert.doleta.gov/pdf/PerformanceData/2017/H-2A_Selected_Statistics_FY2017_Q4.pdf. Sep 30, 2017. Accessed Jan 2, 2018.

Table 2: Comparison of pre-employment hiring costs and in-season management of H-2A and domestic workers employed by Florida citrus harvesters.

	H-2A Foreign Worker	Non-H-2A Domestic Worker
HIRING		
Worker recruitment costs	\$350/worker ¹	\$0
Housing with kitchen facilities	\$1,200/worker-season ¹ (Housing required)	\$0 (Housing voluntarily. If offered, employer can charge workers for cost reimbursement.)
In/Out-bound transportation	\$400/worker ¹ (Round-trip)	\$0
Total estimated cost to hire one H-2A worker for an average 4-month contract period.	\$1,950/worker-season¹	\$0
MANAGEMENT		
Employment status	Contract	“at-will”
Minimum average hourly earnings (as of Jan 1, 2018)	\$11.29/hr	\$8.25/hr
Guaranteed hours	75% of total “offered” hours in job-order	None
In-season transportation	Free from housing location	Free from designated pick-up spot
Workers’ Compensation Insurance	Yes	Yes
Employer Payroll taxes	None	Yes
FICA (Social Security and Medicare)	0	\$620 ²
FUTA (unemployment)	0	\$420 ³

¹ Source: Roka FM, S Simnitt, and D Farnsworth (2017).

² FICA taxes: [7.56% x 21 weeks x 35 hours per week x \$11.12 per hour].

³ FUTA taxes: [6% x \$7,000].

Table 3: History of federal and state (Florida) minimum wages rates and the federal Adverse Effect Wage Rate (AEWR) for Florida, 1995-2018.

Year	Federal minimum wage ¹ (\$/hr)	Florida (state) minimum wage ² (\$/hr)	AEWR ^{3,4} (\$/hr)
1995	\$4.25	\$4.25	\$6.33
1996	\$4.75	\$4.75	\$6.54
1997	\$5.15	\$5.15	\$6.36
1998	\$5.15	\$5.15	\$6.77
1999	\$5.15	\$5.15	\$7.13
2000	\$5.15	\$5.15	\$7.25
2001	\$5.15	\$5.15	\$7.66
2002	\$5.15	\$5.15	\$7.69
2003	\$5.15	\$5.15	\$7.78
2004	\$5.15	\$5.15	\$8.18
2005	\$5.15	\$6.15	\$8.07
2006	\$5.15	\$6.40	\$8.56
2007	\$5.85	\$6.67	\$8.56
2008	\$6.55	\$6.79	\$8.82
2009	\$6.55/\$7.25	\$7.21/\$7.25 ⁵	
2010	\$7.25	\$7.25	\$9.20
2011	\$7.25	\$7.25/\$7.31	\$9.50
2012	\$7.25	\$7.67	\$9.54
2013	\$7.25	\$7.79	\$9.97
2014	\$7.25	\$7.93	\$10.26
2015	\$7.25	\$8.05	\$10.19
2016	\$7.25	\$8.05	\$10.70
2017	\$7.25	\$8.10	\$11.12
2018	\$7.25	\$8.25	\$11.29

Sources:

¹ <https://www.dol.gov/whd/minwage/chart.htm>

² <http://www.floridajobs.org/minimumwage/FloridaMinimumWageHistory2000-2014.pdf>

³ <https://www.foreignlaborcert.doleta.gov/adverse.cfm>, (1995-2010).

⁴ https://www.foreignlaborcert.doleta.gov/pdf/AEWR/AEWR_trends_2011-2017_versionII.pdf

⁵ Federal minimum wage rate increased in July of 2009. Florida minimum wage rose to match the higher federal rate.

which is higher than the state or federal minimum wage rates. The “adverse effect wage rate” (AEWR), which is set by the US Department of Labor, typically is the minimum wage paid by an H-2A employer. As of January 1, 2018, the Florida AEWR increased to \$11.29 per hour, more than \$3 per hour higher than the Florida minimum

wage of \$8.25 (Tables 2 and 3). Under the current H-2A regulations, the employer pays all costs including the visa and fees associated with the petition. The employer also covers in-country recruitment expenses, in-bound travel costs, and housing costs. If the worker completes the contract, the employer pays return trip travel costs.

It is illegal for an employer or any third party to charge H-2A workers a “recruiting fee.” If recruiting fees are collected, the employer will be obligated to reimburse the workers and face DOL penalties.

Critics of the H-2A program argue that any guest worker program attempts to replace domestic workers with “cheaper” foreign workers (Harkinson, 2017). In principle, the H-2A program is designed and enforced as a “supplemental” labor supply program (DOL, 2016). The pre-employment costs, AEW, and housing requirements ensure that labor costs for an H-2A employer will be higher than if only domestic workers had been hired. Furthermore, U.S. law stipulates that an employer must hire any domestic worker seeking the same positions being offered to foreign workers and receive all the same terms as specified under the H-2A contract, including the same number of guaranteed hours paid at the AEW rate. If a domestic worker lives outside the “area of intended employment,” the employer must offer housing and in-bound transportation free of charge.

Like any regulation, enforcement is an ongoing challenge. Worker advocates and their attorneys are concerned that more than a few H-2A employers do not abide by the terms of the contract (Schell, 2016). Investigators from the U.S. Department of Labor – Wage and Hour Division are charged with investigating all violations related to H-2A contracts. As usage of the H-2A program increases, the likelihood of violations will increase. Of particular concern to both worker advocates and agricultural employers is the seemingly annual increase in the AEW. The challenge of complying with higher AEWs relates to how farmworkers are typically paid and is the basis of discussion in our next section, rising minimum wages.

Rising minimum wages

Most migrant and seasonal farmworkers including H-2A workers perform labor-intensive jobs and are paid a piece rate for their efforts. As a management strategy, payment by piece-rate works well in many agricultural situations where the work involves performing repetitive tasks (Billikopf, 2008). Further, a piece-rate system motivates individual effort with minimal supervision. A worker’s earnings equal the number of units completed multiplied by the stated piece rate. A worker’s average hourly earnings, however, must comply with the relevant minimum wage. If a worker’s average hourly piece-rate earnings are less than the minimum wage, an employer must supplement, or “build-up,” the worker’s total earnings until his or her average hourly earnings are at least equal to the relevant minimum wage.

The Fair Labor Standards Act of 1939 established a federal minimum wage whose rate would be set by the U.S. Congress. Until 1995, the minimum wage paid to farmworkers was less than what was paid to non-farmworkers. The federal minimum wage after 1995 was the same for everyone. During the 2004 general election, Florida voters passed a constitutional amendment to establish a state minimum wage and a process by which it would be adjusted annually according to increases in the consumer price index (Florida Dept of Elections, 2004). Florida’s minimum wage initially was set at \$1 per hour more than the federal rate in 2004 (i.e. \$6.15) and has increased every year since, except in 2016 when it

Table 4: Minimum piece rate necessary to meet target hourly wage rates given a constant level of productivity.

Target Rate (\$/hr)	Productivity (8 boxes/hour)
\$4.25	\$0.53
\$8.10	\$1.01
\$11.12	\$1.39

remained the same rate as in 2015 (Table 3). The federal minimum wage was amended in 2006 and increased over a three-year period to \$7.25 per hour, where it has remained ever since (Table 3). In the event that the state minimum wage is different from the federal rate, an employer complies with whichever rate is higher. Pressure to increase minimum wages will likely continue. In 2016, New York and California legislatures passed bills increasing their state minimum wages to \$15 per hour over the next five years (Ballotpedia, 2016), and there appeared to be some support within the U.S. Congress (at least prior to the 2016 presidential election) to increase the federal wage rate.

The economic challenge of rising minimum wages is that worker productivity is ultimately limited by individual physical capacity. Consequently, an employer’s primary recourse to comply with a higher minimum wage is to raise piece rates, which translates directly into higher unit costs of production. As an example, consider a citrus harvester who in 1996 harvested 8 (41-kg) boxes per hour. He had to be paid at least \$0.53 per box in order to satisfy the existing federal minimum wage of \$4.25 (Table 4). By January 2017, the state minimum wage had increased to \$8.10 and for the same level of productivity, the worker now had to be paid \$1.01 per box. If the productivity of an H-2A worker is 8 boxes per hour, in order to satisfy the 2017 AEW of \$11.12 per hour his effective minimum piece rate has to be at least \$1.39 per box (Table 4).

Higher piece rates needed to comply with higher minimum wage rates puts pressure on the competitive position of Florida’s specialty crop growers. Mexico, a major competitor in both the winter fresh tomato and strawberry markets, can produce an 11 kg (25 lbs) carton of fresh tomatoes with a labor cost of \$1.75 per carton (Rojas, 2016). In Florida, the labor cost needed to grow and harvest one hectare of fresh tomatoes is estimated to be \$11,737. If one assumes a marketable yield of 3,500 cartons per hectare, Florida’s unit cost of labor is \$3.35 per carton (VanSickle and McAvoy, 2016). For strawberry growers, labor cost accounts for approximately 40% of the total cost (Wu, Guan, and Garcia-Nazariega, 2017). Each flat of strawberries costs \$2.81 in seasonal labor in Florida, which is 121% higher than that of strawberries produced in Mexico (\$1.27/flat); overall, the labor costs from producing one hectare of strawberries are \$14,000 more in Florida than in Mexico (Wu, Guan, and Garcia-Nazariega, 2017).

Corporate social responsibility

Farm labor advocates have a long history of lobbying for farmworker welfare through unionization, enacting tougher regulations, and pushing for stricter enforcement of state and federal labor laws with direct legal action against individual employers. In 1993, the Coalition of Immokalee Workers (CIW) started to build a “worker-driven” model to advocate on behalf of farmworkers

(Asbed and Hitov, 2017). Their initial strategies utilized hunger strikes and protests at employer locations. Starting in 2001, the CIW initiated a different strategy and shifted its focus to retail buyers (CIW, 2017). Between 2001 and 2017, the CIW organized a network of “participating buyers” (Table 5) who agreed, not only to enhance worker income by paying an additional penny-a-pound for the tomatoes they bought, but also to require that their tomato growers adopt a “code of conduct” (FFSC, 2016). The CIW achieved a major breakthrough in 2011 when the members of the Florida Tomato Exchange agreed to embrace the “code of conduct” and become “participating growers.” Shortly thereafter, the Fair Food Standards Council (FFSC) was created to enforce the Code with annual audits and investigations of worker complaints.

The efforts of the CIW and FFSC are examples of a growing trend to incorporate the principles of “corporate social responsibility” (CSR) within the agricultural supply chain. One core objective of CSR, which is familiar

in the apparel and electronics sectors, has been to uplift the economic, emotional, and physical welfare of workers (Henkle, 2005). A generic CSR plan with respect to labor can be separated in two parts (see Table 6). The first part is a restatement and commitment to comply with existing labor laws and regulations. The second part captures a more fundamental change in the employer-worker relationship.

Historically, dialogue between agricultural employers and their workers has been one-directional. Employers/supervisors set work place policies and expect their employees/workers to adhere without discussion (Asbed and Hitov, 2017). CSR guidelines explicitly bring worker voices into the management operations and formally create processes through which worker grievances are heard and addressed. While trade unions have achieved similar results, these aspects of CSR will push employers in states like Florida, where unions are not widespread (i.e. “right to work” laws), to be accountable to worker concerns and grievances.

Table 5: Fair Food Standards Council’s “participating buyers” and the year each company signed the agreement.

Company	Year Agreement Signed
Yum Brands	2005
McDonald’s	2007
Burger King	2008
Whole Foods Market	2008
Subway	2008
Bon Appétit Management Company	2009
Compass Group	2009
Aramark	2010
Sodexo	2010
Trader Joe’s	2012
Chipotle Mexican Grill	2012
Walmart	2014
The Fresh Market	2015
Ahold USA	2015

Source: FFSC, 2016.

Discussion

Increasing reliance on foreign guest workers, rising minimum wages, and evolving workplace relationships through corporate social responsibility (CSR) bring both costs and opportunities to agricultural operations in Florida and across the U.S. H-2A pre-employment costs are costs agricultural employers do not have to incur when they hire domestic workers. One could argue that harvest costs would have been lower if more domestic workers had been available and willing to work. Employers argue further that the contractual obligations of an H-2A contract creates secondary costs by restricting their ability to terminate a low-productive worker during the contract period. The higher AEWR and generally rising minimum wage rates accentuate the effects of low productivity and add pressure on the employer to increase piece rates, which directly increases unit cost of production. Florida fruit and vegetable growers compete in

Table 6: Components of a generic management plan to follow corporate social responsibility (CSR) guidelines with federal and state enforcement agencies.

Component	CSR Provisions	Federal/State Agency
Part 1: Child labor	Discouraged	US Dept of Labor; FL Dept Bus Prof Reg US Dept of Justice US Equal Employment Opportunity Commission; FL Human Rights Commission US Dept of Labor; FL Dept Bus Prof Reg
Forced Labor	Prohibited	
Discrimination	Eight protected classes	
Working hours and pay	Min wage; Standard week (40 hrs); Overtime pay	
Safe & Healthy Workplace	Minimize risks Safety training Clean bathrooms potable water	
Disciplinary Practices	Corporal punishment prohibited.	
Part 2: Freedom of Association	Formation of unions or company level worker organization;	No corresponding federal or state regulations.
Management Systems	Written policies; Joint worker/management committees; Grievance and complaint resolution process; 3 rd party audits.	

global markets. Added costs from importing foreign workers, managing higher minimum wage rates, and/or adjusting to CSR practices force unit costs of production higher and erode the competitive position of Florida growers.

Offsetting some of the costs associated with guest workers and higher minimum wages are benefits, some of which could be significant. In addition to the direct cost offsets of not paying social security and unemployment taxes to foreign workers, the same contractual obligations that reduce in-season flexibility to terminate workers, allows for a more efficient hiring process. Employers prior to entering the H-2A program complained of high worker turnover rates (Roka, 2017b). When relying on domestic workers, they had to process two to four times the number of job applicants throughout the season in order to secure a sufficient number of workers. With the contractual format of the H-2A program, an employer processes and hires only the number of workers needed. In addition, the contractual certainty of an H-2A workforce allows an employer to plan more efficiently how to manage workers across the entire contract period. More importantly, H-2A employers have the opportunity to “build” workforce productivity over time. That is, the most productive H-2A workers are identified and invited back the following year. Over successive years, an H-2A employer can increase the productivity of his or her overall workforce and create additional efficiencies that are derived from a workforce that is familiar and comfortable with the operational environment of the company (Roka, 2017b).

The trend of increasing numbers of H-2A workers in the Florida specialty crop industries is expected to continue. On one hand, this trend reflects the gravity of labor shortage problems and the serious economic consequence of not having enough labor to grow and harvest the crops (Guan and Wu, 2018). On the other hand, it suggests having a stable and secure labor force under contract has a value to specialty crop growers. As an example, consider strawberries. Strawberry yields fluctuate and are subject to high uncertainties over the season. Further, the crop is highly perishable and fruit prices are sensitive to supply. Berries need to be harvested every two to three days and shipped to the market in a relatively short time (Wu, Guan, and Whitaker, 2015). Fruit perishability, volatile yields, and market prices create risks, which can be mitigated to some extent by having a stable and secure labor force to ensure timely harvest, and handling that is critical for strawberry growers. Guan and Wu (2018) proposed a model to quantify the economic value of the availability and stability of labor force, which justifies the growth of the H-2A hiring within the strawberry industry.

The principles of corporate social responsibility (CSR) are becoming more integrated into agricultural operations. CSR is being driven by retail companies, which are mandating adoption of CSR guidelines throughout their supply chain. For agricultural producers within such a supply chain, market access of their products will be dependent on their adoption of CSR principles. The CIW/FFSC model aggressively enforces its code of conduct. Those growers who violate the code are debarred from the Fair Food Program and unable to sell their fruit to “participating buyers,” many of whom are their primary buyers (Asbed and Hitov, 2017).

The cost of adopting many CSR components should be minimal, as federal and state laws already require

many of these components. CSR certification, however, will involve the costs associated with third-party audits and additional record keeping requirements that are part of any certification process (Roka, 2016). Probably, the biggest challenge for many agricultural employers to adopt CSR principles will be adjusting their management policies to be more inclusive of worker input and implementing a worker grievance system which will empower workers to challenge long-standing employer policies (Asbed and Hitov, 2017).

Potential benefits of CSR certification are two-fold. First, some evidence exists that working conditions are correlated directly to worker productivity (Billikopf 1999; 2001). If the culture of CSR enhances the workplace environment, then one should expect an improvement in overall productivity and/or cost efficiency. Any improvement in worker productivity offsets to some degree the adverse cost implications of higher minimum wages. A second benefit could be in the form of market access beyond the punitive consequences found in the CIW/FFP model. Florida tomato and citrus growers often cite U.S. regulations, particularly with respect to agricultural labor, as creating a competitive disadvantage with foreign growers. If social responsibility or social justice ideals resonate sufficiently among US and foreign consumers, retail brands and their affiliate suppliers who embrace CSR may realize benefits in terms of greater market share and perhaps, at higher prices. At the very least, widespread demand for production under CSR principles will force foreign agricultural producers to adopt a CSR framework and thereby incur additional costs associated with CSR compliance that may not be required by their respective governments.

Concluding comments

Farm labor trends in the United States suggest that growers will have to hire more H-2A foreign guest workers, pay higher wages, and comply with more robust CSR rules and practices. These trends are challenging growers to rethink their traditional labor management policies. Pre-employment costs to hire guest workers and rising minimum wage rates push total costs higher and could erode the competitive position of Florida fruit and vegetable growers as they compete in an increasingly global marketplace. Recognizing the evolving trends should help employers to adjust appropriately to the changing conditions. Those employers who embrace the potential positive aspects of these changes may actually enhance their future economic sustainability. For example, the structure of the current H-2A guest worker program provides incentives for employers to recruit, train, and retain their most productive workers. The principles guiding corporate social accountability could foster a more collaborative working environment by increasing the engagement between company supervisors and workers, which in turn could increase the likelihood of improving overall efficiency within the farming operation.

To address ongoing changes in the farm labor market, specialty crop growers in Florida will need to innovate and adjust to the new market, policy, and production environments. In particular, the development of labor-saving technologies is a necessity to bring down the cost of production, which is essential to keep any industry competitive in the face of global competition.

Labor cost-saving systems and technologies include not only mechanical/robotic harvesting devices, which replace manual labor, but also new production systems, such as new plant cultivars, bed designs, or other changes, which could enhance the productivity of manual labor. These solutions, however, are often beyond the capabilities of individual growers. Even for the largest corporations, these technological innovations may be beyond their control because their expertise and overall business plan is on production and marketing of their crops and not in research and development. Research projects often take a long time to develop a useful and cost-effective product. Public funds from state and federal governments will be needed to develop the new technologies to increase labor efficiencies.

At the policy level, government officials may negotiate or re-negotiate trade agreements more favorable for U.S. growers. Buyers of foreign grown fruit and vegetables could also encourage adoption of good labor management practices to make it consistent among all sources of products, imported or domestically produced. Whether this would occur and the extent to which such practices can be effective depend on the degree of social awareness among consumers and market forces behind consumer preferences.

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