Farmers' Business Expectations and Strategies under Immigration-Related Changes in Farm Labor Market Conditions: A Survey of Southeastern Organic and Conventional Farm Businesses

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INTRODUCTION

The stricter enforcement of immigration policies has influenced conditions in the farm labor market as these policies affected an estimated 12 million unauthorized immigrants in the country, 40% of whom are hired as farm workers (Seid, 2006; Levine, 2004). These illegal workers are mostly "poorly paid and poorly treated" (Smith, 2005) usually hired at wages below prevailing market rates. Their displacement expectedly created a stir in the labor market as farm businesses started to rely on regular pools of potential farm workers (including those from other industries) that could probably be lured to engage in farm work if farm labor wages are increased significantly. Even if illegal immigrants succeed in properly documenting their stay in the country, the legalization of the immigration status of most of these workers will only enhance their bargaining position to demand for better wages at or above prevailing market rates, in addition to the usual fringe benefits (insurance, bonuses and others) and better working conditions they deserve. An economist from the American Farm Bureau, for instance, estimates that the immigration reform can push farm wages from the current average of $9.50 per hour to about $14.50 an hour as farms are constrained to hire lower-wage workers for low-skilled jobs (Seid, 2006). He foresees that the ultimate effect of all these immigration reforms is to raise commodity prices from 5% to 10% as farm businesses pass on the burden of higher labor costs to the consumers.

These conditions are expected to affect the viability of farm businesses. The logical expectation is that the economic viability of organic farms, relative to their conventional farming counterparts, could be threatened by these developments in the farm labor market. Organic farming, an economically and environmentally sustainable farming system, is a more labor-intensive operation compared to the conventional farming system that employs larger farm machineries and synthetic agrichemicals. The organic farms' characteristic limited use of synthetic chemical inputs requires them to implement alternative techniques for pest removal, soil additions and conservation that are usually done manually. For example, certain practices that are apparently more labor-intensive include the replacement of fertilizers with nitrogen-fixing cover crops and composted animal and green manures; cultivations and hand weeding to control invasive plant species; and multi-crop rotations and often a type of comprehensive ecosystem management which creates a build-up of beneficial/predator insect species to suppress pest insects.

Organic farms in the Southeastern region are poised to experience even more challenging growing conditions than their counterparts in other parts of the country. For instance, farmers in this region need to employ additional soil enhancement management techniques due to the rapid decomposition of organic matter and aggressive emergence of various pests and weeds attributed to the region's mild winters, long warm summers and abundant moisture. Activities geared towards rebuilding soil organic matter (such as the alley cropping technique proposed by a SARE funded project, #LS06-190) define a much greater need for more labor inputs.

METHODOLOGY

A research project, funded by a grant from the Southern Sustainable Agriculture and Research Education (SARE), was developed to deal with differences in farm labor management strategies of organic and conventional farms. A survey was conducted among organic, transitioning, and conventional farms in Georgia, North Carolina, South Carolina, Alabama, and Mississippi. Target respondents were identified through contacts with organic farming associations, commodity groups and local USDA agencies. The survey questionnaire gathered demographic, structural and operating characteristics of farms as well as the producers' expectations of changes in the labor market as a result of stricter enforcement of immigration laws. Their proposed coping strategies have also been elicited in this survey.

This survey was conducted in the latter half of 2007. The survey instrument was mailed to 518 organic and conventional farm operators in Georgia, South Carolina, North Carolina, Mississippi, and Alabama. Of these farms, 82 responses were received, representing a response rate of 15.8%.

The following sections summarize the major findings of this survey according to demographic and structural characteristics, labor management strategies, and reactions to changes in the farm labor market. Please be cautioned that certain response categories might contain missing observations as certain respondents could have skipped some questions.

A. RESPONDENTS' GENERAL PROFILE: DEMOGRAPHIC AND STRUCTURAL CHARACTERISTICS

A.1 Respondents' Location and Type of Farm

Farming System	*State*					*Totals*
	Alabama	*Georgia*	*Mississippi*	*North Carolina*	*South Carolina*	
Conventional	9	11	9	8	3	40
Organic	6	8	4	20	5	43
Totals	15	19	13	28	8	83

A.2 Experience, Educational Attainment, Gender, and Age of Farm Operators, By Farm Type

Farming System	*Farming Experience (Years)*	*Educational Attainment* *(Refer to categories below)*	*Age (Years)*	*Gender*	
				Male	*Female*
Conventional Farms				32	8
Mean	20.18	4.49	53.28		
Standard Deviation	15.35	2.98	15.17		
Minimum	2	1	16		
Maximum	65	20	82		
Organic Farms				20	23
Mean	13.79	4.70	48.35		
Standard Deviation	11.18	1.73	12.02		
Minimum	2	2	26		
Maximum	50	7	78		

A.3 Business Organizational Structure, By Farm Type

Farming System	*Business Organizational Structure*				*Totals*
	Sole Proprietorship	*Partnership*	*Corporation*	*Others*	
Conventional Farms	30	5	4		39
Organic Farms	29	4	8	1	42
Totals	59	9	12	1	81

A.4 Time Devoted to Farm Business, By Gender and Farm Type

Gender and Farm Types	*Full-Time Farmers*	*Part-Time Farmers*
By Farm Type		
Conventional	23	18
Organic	25	18
By Gender		
Male	28	24
Female	19	12

The summary in table A.1 indicates that the two largest participant groups operate farms in North Carolina (34%) and Georgia (23%). Overall, this study's sample farms are almost evenly divided among conventional and organic farms. North Carolina farms comprised a large percentage (47%) of the organic farms in this dataset while Georgia supplied 28% of the participating conventional farms in this study.

Table A.2 presents the following indications:

- Conventional farms are predominantly operated by male farm operators (32 out of 40 farms) while male and female farm operators seem to almost evenly share the management of the organic farms in this survey.
- Conventional farms altogether seem to have been in the farming business much longer than the organic farms as their collective average farming experience is about 20 years, compared to 14 years for organic farms.
- Organic farm operators seem to have almost completed on average a college degree while the average educational attainment of conventional farm operators is around junior college/trade school level.

- Conventional farm operators are more experienced and older than their counterparts in the organic farming category. The average age of conventional farm operators in this sample is 53 years, with 16 and 82 years as the youngest and oldest ages recorded in this survey. Organic farm operators are about 48 years old on the average.

From table A.3, it appears that there is not much variation in the distribution of conventional and organic farms across the various business organizational structures. Majority of the farm businesses in this sample (69% or more) are organized as single proprietorships. The rest are classified as either partnerships or corporate entities.

The summary in table A.4 shows that there is also not much variation in the classification of conventional and organic farmers as full-time and part-time operators. These two farm types have 58% to 60% of their operators working full-time on the farm. Percentage-wise (calculated within each gender class), female farm operators tend to work full-time on the farm (61%) compared to 54% of the male farm operators who are willing to do so.

B. RESPONDENTS' FARM EMPLOYMENT EXPECTATIONS AND COPING STRATEGIES UNDER STRICTER IMMIGRATION POLICIES

B.1 LABOR SOURCING ISSUES

1. Respondents' Past Hiring Experiences: Level of Difficulty in Hiring Non-Family Farm Workers, By Farm Type

Question: *"Based on your experience last year (2006) and the past several years, did you usually experience any difficulty in finding non-family farm workers to hire whenever you needed them?"*

Responses	Conventional Farms			Organic Farms			Total	
	Number	*% of All*	*% of Farm Category*	*Number*	*% of All*	*% of Farm Category*	Number	% of All
Never	10	13.70	27.78	12	16.44	32.43	22	30.14
Sometimes	12	16.44	33.33	11	15.07	29.73	23	31.51
Most of the time	8	10.96	22.22	6	8.22	16.22	14	19.18
Always	4	5.48	11.11	8	10.96	21.62	12	16.44
No Answer	2	2.74	5.56	0	0.00	0.00	3	2.74
Total	36	49.32	100.00	37	50.69	100.00	73	100.00

As a starting point in dwelling with the issue of changing market labor conditions, the survey participants provided a general indication of their previous farm labor hiring experiences. Based on the results summarized in the above table (1), 28% of our 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.

2. Respondents' Expectations on Effects of Immigration Policies on Farm Labor Supply, By Farm Type

Question: *"Do you expect the new immigration policies will affect the farm workers' supply in your area?"*								
Responses	**Conventional Farms**			**Organic Farms**			**Total**	
	Number	*% of All*	*% of Farm Category*	*Number*	*% of All*	*% of Farm Category*	Number	% of All
Yes, significantly	15	18.07	37.50	12	14.46	27.91	27	32.53
Yes, but only slightly	5	6.02	12.50	7	8.43	16.28	12	14.46
Not at all	8	9.64	20.00	7	8.43	16.28	15	18.07
I don't know	12	14.46	30.00	17	20.48	39.53	29	34.94
Total	40	48.19	100.00	43	51.81	100.00	83	100.00

Among those that provided an opinion on the effects of immigration policies on farm labor supply conditions (providing either Yes or No answers), the most popular answer in both farm groups revealed some farmers' expectations for significant changes to happen in the farm labor market (38% of conventional farms and 28% of organic farms). Combining the first two response categories, 50% of conventional farmers recognize a linkage between new (stricter) immigration policies and farm labor supply conditions. As for organic farms, 44% chose either of the two "Yes" categories.

On the other hand, 20% of conventional farms and 16% of organic farms do not foresee any immigration policy effect on farm labor supply while 35% of the entire survey sample did not express an opinion about any relationship between immigration policy and farm labor supply.

3. *Respondents' Coping Strategies in the event of an Immigration Policy-Fueled Labor Shortage, By Farm Type*

Question: *"How are you going to deal with a shortage of workers should it arise in the future as a result of stricter implementation of immigration policies?"* *(Respondents can choose more than one strategy.)*

Responses	**Conventional Farms**			**Organic Farms**			**Total**	
	Number	*% of All*	*% of Farm Category*	*Number*	*% of All*	*% of Farm Category*	Number	% of All
Reduce off-farm working time and work more in the farm	4	2.42	5.71	11	6.67	11.58	15	9.09
Quit my off-farm work and spend more time in the farm	0	0	0	0	0	0	0	0
Rely more on family members to devote more time to farm work	11	6.67	15.71	13	7.88	13.68	24	14.55
Offer higher wages to attract some available non-family farm workers for hire	8	4.85	11.43	10	6.06	10.53	18	10.91
Offer other worker fringe benefits to attract some available non-family farm workers for hire	1	0.61	1.43	2	1.21	2.11	3	1.82
Downsizing (i.e. continue farming but at a smaller scale and/or size)	12	7.27	17.14	13	7.88	13.68	25	15.15
Change production plans to involve commodities that require less labor	6	3.64	8.57	15	9.09	15.79	21	12.73
Invest in more machineries to reduce the	13	7.88	18.57	9	5.45	9.47	22	13.33

need for more labor inputs								
Consider other farming methods that do not rely much on labor	10	6.06	14.29	14	8.48	14.74	24	14.55
Others	5	3.03	7.14	8	4.85	8.42	13	7.88
Total Frequency	70	42.42	100.00	95	57.58	100.00	165	100.00

The survey participants' preferences for specific business strategies provide interesting implications that can be associated with certain structural differences between organic and conventional farms. 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 2nd 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.

B.2 WAGE-RELATED ISSUES

1. Respondents' Expectations on the Wage Effect of Immigration Policies, By Farm Type

Question: *"Do you expect the new (stricter) immigration policies to affect the wage rates demanded by the farm workers in your area?"*								
Responses	**Conventional Farms**			**Organic Farms**			**Total**	
	Number	*% of All*	*% of Farm Category*	*Number*	*% of All*	*% of Farm Category*	Number	% of All
Yes, significantly	12	14.63	30.00	11	13.41	26.19	23	28.05
Yes, but only slightly	5	6.10	12.50	6	7.32	14.29	11	13.41
Not at all	5	6.10	12.50	3	3.66	7.14	8	9.76
I don't know	18	21.95	45.00	22	26.83	52.38	40	48.78
Total	40	48.78	100.00	42	51.22	100.00	82	100.00

On wage effect expectations, almost half of the entire sample (49%) did not provide an opinion on the relationship between new (stricter) immigration policies and wage rates. For those with opinions or expectations, about 10% do not see any wage effect resulting from constricted farm labor supply due to immigration policies. On the other hand, 30% of conventional farms and 26% of organic farms expect significant wage rate adjustments. The combined proportions of farmers that expect either significant or slight farm wage rate adjustments that can be provoked by immigration policies are 43% of conventional farms and 40% of organic farms.

2. *Expected Qualitative Scenarios for Farm Wages, By Farm Type*

Question: *"What do you think of the (expected) change in farm wage rates?"*								
Responses	**Conventional Farms**			**Organic Farms**			**Total**	
	Number	*% of All*	*% of Farm Category*	*Number*	*% of All*	*% of Farm Category*	Number	% of All
Reasonable and affordable	7	8.64	17.50	8	9.88	19.51	15	18.52
Reasonable, but not affordable	10	12.35	25.00	8	9.88	19.51	18	22.22
Unreasonable but affordable	3	3.70	7.50	0	0	0	3	3.7
Unreasonable and not affordable	3	3.70	7.50	5	6.17	12.20	8	9.88
Don't know	17	20.99	42.50	20	24.69	48.78	37	45.68
Total	40	49.38	100.00	41	50.62	100.00	81	100.00

About 41% of conventional farms expect reasonable adjustments in farm wages due to the supply effect of immigration policies in the farm labor market. Of these respondents, 41% (or 18% of all conventional farms) think that the adjustments are affordable while 59% (or 25% of all conventional farms) expect the changes to be unaffordable.

As for organic farms, 39% of them indicated their expectations for reasonable farm wage adjustments. These respondents are equally split in their views about the affordability of the farm wage adjustments.

Among conventional farms, 15% expect the wage adjustments to be unreasonable, with an equal share for those with opposite views on the affordability of the wage rate adjustments. Twelve percent (12%) of organic farms expect unreasonable wage rate adjustments and all of them indicate their affordability of such adjustments.

3. *Respondents' Coping Strategies to Address Expected Changes in Farm Wage Rates, By Farm Type*

Question: *"How do you intend to cope with expected changes in farm wages that may be demanded by farm workers in your area?"* *(Respondents can choose more than one strategy.)*

Responses	**Conventional Farms**			**Organic Farms**			**Total**	
	Number	*% of All*	*% of Farm Category*	*Number*	*% of All*	*% of Farm Category*	Number	% of All
Reduce off-farm working time and work more in the farm	2	1.49	3.51	8	5.97	10.39	10	7.46
Quit my off-farm work and spend more time in the farm	1	0.75	1.75	0	0	0	1	0.75
Rely more on family members to devote more time to farm work	7	5.22	12.28	11	8.21	14.29	18	13.43
Downsizing (i.e. continue farming but at a smaller scale and/or size)	10	7.46	17.54	10	7.46	12.99	20	14.93
Change production plans to involve commodities that require less labor	8	5.97	14.04	12	8.96	15.58	20	14.93
Invest in more machineries to reduce the need for more labor inputs	12	8.96	21.05	10	7.46	12.99	22	16.42
Consider other farming methods that do not rely much on labor	11	8.21	19.30	14	10.45	18.18	25	18.66
Others	6	4.48	10.53	12	8.96	15.58	18	13.43
Total Frequency	57	42.54	100.00	77	57.46	100.00	134	100.00

As in the farm hiring strategies, conventional farms are more inclined (21% of this group) to consider input substitution strategies that will make their operations more capital -intensive. Production diversification strategies are again popular (18% of the group) among organic farms in the event that farm wage rate adjustments are experienced due to leaner farm labor supply caused by immigration policies.

Organic farms maintain their preference (14% of the group) for substituting family labor for hired, non-family labor. Conventional farms, on the other hand, also consider other less labor-intensive production methods (19%) and downsizing strategies (18%) to cope with wage adjustments.

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