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**August 2011**

**RB 2011-02**

# **Survey of New York Fruit and Vegetable Farm Employers 2009**

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## **PREFACE**

Thomas Maloney is a Senior Extension Associate and Nelson Bills is an Emeritus Professor in the Charles H. Dyson School of Applied Economics and Management at Cornell University.

Support from the New York State Department of Agriculture and Markets and the New York State Field Office, National Agricultural Statistics Service (NASS), made this project possible. Special thanks go to Steve Ropel, NASS New York State Field Office Director for his valuable assistance and guidance on survey design.

The authors wish to acknowledge the funders for this project. Funding for the data collection portion of this project was provided by the New York Farm Viability Institute (NYFVI). Funding for the data analysis and reporting of the study was provided by the Wayne County Growers and Processors.

The authors would like to thank the following individuals for their review of this manuscript and their helpful comments: Dr. Bradley Rickard, Assistant Professor and Marc Smith, Extension Associate, Charles H. Dyson School of Applied Economics and Management, at Cornell University.

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**TABLE OF CONTENTS**

Abstract ..... 6

Introduction..... 7

Survey Methodology ..... 8

Survey Results ..... 14

Discussion and Implications ..... 30

Summary ..... 34

References ..... 35

Appendix I: Survey Questionnaire ..... 38

## LIST OF TABLES AND FIGURES

Table 1: Farm employment by farm type: farms with payroll and number of hired farm workers, New York State, 2007 .....	12
Table 2: Farm employment by farm type: farm workers by number of days worked, New York State, 2007.....	13
Table 3: Proposed survey sub-population .....	14
Table 4: Mail survey sample .....	14
Figure 1: Usable Surveys, Expanded Sample of Farms .....	15
Figure 2: Workers Employed at Peak.....	15
Figure 3: Market Value of Agricultural Products .....	16
Figure 4-1: Size Distribution of Peak Labor Force (Fruit Farms).....	18
Figure 4-2: Size Distribution of Peak Labor Force (Vegetable Farms) .....	18
Figure 5: Average Hours Worked for General Laborers.....	19
Figure 6: Average Hourly Rate Paid for General Laborers.....	19
Figure 7: Estimated Annual Benefits Provided per Hired Worker .....	20
Figure 8: Average Hours Worked per Week by Type of Employee .....	21
Figure 9: Annual Salaries for Mid-level Managers.....	21
Figure 10: Annual Salaries for Top-level Managers .....	22
Figure 11: Estimated Annual Value of Benefits Provided per Hired Manager.....	22
Table 5: Number of Fruit and Vegetable Workers by First Language.....	23
Figure 12: Size Distribution of Peak Hispanic Labor Force (Percent of Farms) .....	24
Figure 13: Size Distribution of Peak Hispanic Labor Force (Percent of Employees) .....	24
Figure 14: Ethnicity of Peak Labor Force on Fruit and Vegetable Farms with One or More Hispanic Workers.....	25
Figure 15: Estimated Percent of Workers with Spanish or English as a First Language .....	25
Figure 16: Language Skills of Hispanic Workers .....	26
Figure 17: Services Needed to Assist Spanish Speaking Employees .....	26
Figure 18: Services Needed to Assist Farm Managers Who Work with Spanish Speaking Employees.....	27
Figure 19: Average Scores on Attitudes Toward Proposed Changes in State Law ....	28
Figure 20: Average Scores on Employer Attitudes Toward Changes in Federal Immigration Policies (Fruit Farms) .....	30
Figure 21: Average Scores on Attitudes Toward Changes in Federal Immigration Policies (Vegetable Farms).....	30

## **Abstract**

The purpose of this study is to gather information from fruit, vegetable and dairy farm employers regarding agricultural workforce issues in New York agriculture. The survey provides new insights into five key topic areas; the number of workers on New York farms, employee wages and benefits, characteristics of the Hispanic workforce, attitudes among farm operators regarding proposed State labor law changes and Federal immigration reform.

Expanded survey estimates of the peak agricultural workforce in this study, including part-time and full-time workers, totaled 33,200. The focus of this report is on the fruit and vegetable industry where the number of hired employees in the fruit industry is estimated to be 14,700 and the number of hired employees in the vegetable industry is estimated to be 8,900.

Fruit farm employers reported that experienced general laborers were paid an average of \$10.65 per hour and inexperienced general laborers were paid an average of \$8.52. Vegetable farm employers reported that experienced general laborers were paid an average of \$9.98 per hour and inexperienced general laborers were paid \$8.25 per hour.

Hispanic workers play an increasingly important role in the New York fruit and vegetable industry. The survey found that 11,200 (47%) fruit and vegetable workers speak Spanish as their first language. Regarding their Hispanic workers, farm employers reported that the two issues requiring the most assistance were immigration issues and English training.

At the time the survey was conducted, New York's labor advocates and farm employers were debating legislation that would have required farm employers to provide their workers overtime pay and collective bargaining rights. The majority of fruit and vegetable farmers surveyed indicated that they would be very concerned if their workers were allowed to form unions or if they were required to pay overtime.

Regarding Federal immigration reform, survey participants were asked to rate the importance of national immigration reform, a path to citizenship and a guest worker program to their business. While all three issues were important to farm managers, a path to citizenship was reported to be slightly less important than national immigration reform or a guest worker program.

## **Introduction**

A longstanding concern for American agriculture is the availability and adequacy of on-farm labor. Most farm businesses are relatively small, do not have a payroll, and rely on family labor. Some farm businesses hire farm workers intermittently to meet seasonal labor needs while many others require a regular workforce. In recent years, increasing numbers of New York State farm operators have reached out to Hispanic immigrants to help meet their labor needs. As a result, the farm community is now more actively engaged in the national debate over immigration issues. These issues have received much recent attention from the media, employers, policymakers and the public. Stalled attempts to enact comprehensive immigration reform in the U.S. Congress and increased immigration enforcement activities have heightened concerns over illegal immigration.

Farm organizations engage State legislators regularly on issues related to evolving State labor laws and regulations. These legislative actions can affect the availability and cost of on-farm labor. New York's labor advocates and farm employers have recently debated legislation that would require farm employers to provide their workers overtime pay and collective bargaining rights.

Whether focused on State or Federal policy, an overarching question deals with workforce ethnicity and the use of immigrant labor by business firms. Unfortunately, core data on the immigrant population are often limited or absent altogether from the discussion. Clarity on concerns over unauthorized individuals who are living and working in the United States suffers accordingly. According to a widely cited report published by the Pew Hispanic Center four years ago, the estimated population of unauthorized individuals ranges between 11.5 and 12 million (Passel, 2006). There are acute gaps in the details. Very little is known about the work status of this population in various industries and the number employed on farms. Surprisingly, detailed annual descriptions of the farm labor pool are not published by the USDA at state level, let alone a database providing insight into immigration issues, the ethnic composition of the farm labor force, and the value of farm employee wages and benefits.

To help resolve the information gap and better inform policy discussions, this study was undertaken with five objectives. The first is to add to the available data relating to the estimated number of farm workers in three of the most labor-intensive segments of New York agriculture: fruits, vegetables and dairy. The second is to provide current information on employee wages and benefits on both general laborers and managers. The third objective is to gather information on Hispanic workforce issues. The fourth objective is to gather attitudinal data from farm managers regarding proposed State labor policies that impact overtime pay and collective bargaining rights for farm workers. The fifth objective is to gather attitudinal data from farm managers to assess their attitudes regarding policies that would reform immigration laws in the United States.



## **Survey Methodology**

This survey was designed to better inform discussions on several key labor issues important to New York farms. The survey centered on the Hispanic farm workforce; and targeted labor use in three agricultural sectors: dairy, fruit and vegetables. Together, these farm commodities account for 71 % of total cash receipts from farm marketing in New York State (USDA, 2010b). This survey is the third in a series of survey efforts to help inform educational programs and public policy discussions dealing with ethnicity and farm labor use in New York State. A 2005 New York State study used personal interviews to obtain detailed information on Hispanic employment and employment practices in the New York State dairy industry (Maloney and Grusenmeyer, 2005). A second New York State study, published in 2008 (Maloney and Bills, 2008b), concentrated on Hispanic labor use in the dairy, fruit, and vegetable sectors and farmer's views on Federal immigration policy.

### **Other Sources of Information**

Looking at other states, the USDA-NASS Wisconsin Field office surveyed about 3,000 dairy farm operators in 2007, focusing on structural features of the Wisconsin dairy industry and issues confronting dairy producers (USDA-NASS, 2008). Those survey results included an estimate of the number of hired, nonfamily workers on Wisconsin dairy farms and the fraction categorized as Hispanic. The Wisconsin study added a new level of precision by classifying farm workers based on their first language. Those employees who use Spanish as their first language were classified as Hispanic workers. More recent work in Wisconsin deals with a variety of social and economic issues confronting the State's dairy sector. A series of five briefing papers details the circumstances surrounding Hispanic farm labor use, along with consideration of the wider communities impacted by the arrival of immigrant labor (Harrison, et al, 2009a-e). Much of the Wisconsin work is complementary to analyses of the New York State communities and the social connections with immigrant/migrant populations (Parra and Pfeffer, 2006; Pfeffer, 2008; Pfeffer and Parra, 2004; Pfeffer and Parra, 2005a; Pfeffer and Parra, 2005b; Pfeffer and Parra, 2008). Looking beyond New York State and Wisconsin, analysts in Washington State have accessed farm level survey results that allow them to generate extensive data on farm employment, including seasonal labor use in the State's fruit commodities sectors (Stromsdorfer et al, 2008).

Analysis of Hispanic farm employment at the state level is in sharp contrast to USDA survey/Census efforts. The USDA publishes results from an ongoing Farm Labor Survey (USDA-NASS, 2010c), but that survey does not deal with management or policy. Further, the design provides multistate rather than state-level estimates of labor use and practice on farms. USDA-NASS regularly collaborates with the Economic Research Service (ERS), and conducts an annual Agricultural Resource Management Survey (ARMS). The ARMS results are published on a regional basis, but do not touch on labor use or labor management issues (USDA, 2010a). Instead, USDA-ERS analysis and commentary on farm labor (for example, see Kandel, 2008), is based on results obtained from the U.S. Census Bureau's annual Current Population Survey (CPS). Results from

the CPS are only reported at the national level. The CPS also provides benchmark data for the widely cited and discussed reports recently published by the Pew Hispanic Center (Passel, 2006; Passel and Cohn, 2009a; Passel and Cohn, 2009b; Passel and Cohn, 2010). Finally, a recent study prepared under contract for the National Milk Producers Federation examined the economic impact of immigrant labor use in the dairy sector (Rosson, et al, 2009; Manthei, 2010). Responses from just over 5,000 dairy farm operators in 47 states indicated that 50% of all dairy farms use immigrant labor. The number of immigrants employed was estimated at 138,000, measured in terms of full-time equivalents (FTE). These farms account for an estimated 62% of the U.S. fluid milk supply.

The aforementioned studies are valuable and demonstrate the wider and deeper engagement of the research community in a variety of concerns related to the U.S. immigrant population and labor availability<sup>1</sup>. Much, but not all, of this work deals specifically with farm labor concerns but does not touch on public policy issues. A complete and adequately nuanced farm labor picture, especially at the state and sub-state level, is absent. As a result, many questions on farm labor use are unanswered or not answered in a timely fashion.

The information gaps are especially acute in the policy arena. The farm community often grapples with policy concerns in an information vacuum, meaning that numerous debates and discussions about farm labor and farm labor policies and programs are not data-driven or fact based. Conversely, opportunities to fine tune or even craft an educational message tailored to the needs of New York State farm and food industry appear to have considerable merit.

### **Survey Design**

Ideally, one would put agricultural labor concerns into perspective with comprehensive and internally consistent definitions of farm businesses, farm workers, and key demographic characteristics of the agricultural workforce. To that end, we employ data conventions and definitions that parallel those used by the USDA and their five-year Census of Agriculture where possible. The Census stands alone as a linchpin data source because data are released at state level and below. Further, only this source allows analysts to distinguish between labor use on different types of farm businesses.

The Census reports on farms with gross sales of \$1,000 or more during the Census year. Additional farms are counted if the USDA deems that business has potential to generate \$1,000 of product or more each year<sup>2</sup>. A substantial share of all New York farms do not have a payroll. For those that do, the Census asks farm operators to report on numbers of

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<sup>1</sup> Another large and long-lived research area deals with international patterns of migration. A complete accounting of this work is beyond the scope of this study. See Cairns, et al (2010) for a recent analysis of long term migration into the US.

<sup>2</sup> The 2007 Census shows that nearly 25 % of all New York farms had sales under \$1,000 during the Census year (Bills and Stanton, 2009)

hired farm workers, and the associated payroll expense, during the census year. Total hired farm workers, including paid family members, are reported in two categories: those working more than or less than 150 days a year. This procedure explicitly recognizes the seasonal nature of labor use on farms. Counts of farm workers, on the other hand, exclude contract laborers. These are labor services provided to farm operators under a contractual arrangement with a third party.

Published Census data allow comparisons of labor utilization and employee numbers between farm types aggregated to the state level. Farm types are defined by the mix of commodities produced and sold by the business; many farms produce more than one commodity and, in those cases, the businesses are classified based on a plurality of receipts among commodity groups. This means that a dairy farm could gather as much as half of total receipts from other livestock enterprises or from crop sales and still be classified as a dairy farm.

Farm types of interest in this study are businesses classified by the USDA as dairy farms, vegetable farms, or fruit farms. Table 1 summarizes results from the most recent 2007 Census for each of these farm classes. These data demonstrate the predominance of the dairy sector with respect to labor use, with nearly 25% of all farm workers employed on dairy farms during the Census year. Businesses classified as fruit or vegetable farms account for another 41% of all farm workers. However, a relatively large number of these workers are employed on a seasonal basis as reflected in employment for fewer than 150 days during the Census year (Table 2).

The survey design for this study differs from the Census data reported in Tables 1 and 2 in two important ways. First, we decided to handle the seasonality of farm employment in a different way. Instead of focusing on a 150 day break point, we asked respondents to report on the number of employees on the farm at “peak” during calendar 2009. Deriving estimates of “peak employment” means that our results may or may not coincide with those published in the census because of ambiguities in interpretation. But, the peak employment metric, in our judgment, provides a better understanding of the labor complement on New York State farms.

The second difference is that we asked respondents to exclude paid or payrolled family workers. This data convention will lead to an unambiguous decrease in the number of workers reported our survey, compared to census results, because many New York State farms are operated by family members. However, once again, our approach streamlines the line of questioning in the survey and provides the focus we want on public policy issues and farm worker ethnicity.

To classify employees based on ethnicity, we incorporate definitions used in a recent Wisconsin study (USDA, 2008) and asked employers to report the number of workers who use Spanish as their first language. We classified those workers as Hispanic and the remainder as non-Hispanic. It was assumed that this result would most closely correspond to the results one might obtain by asking farm employees themselves to self-identify based on their ethnicity.

Two different questionnaires were used: one for dairy and one for both fruit and vegetables. Each contained identical questions except that the dairy questionnaire contained extra questions about wages paid to workers who milked cows exclusively, compared to wages paid to general farm laborers. These survey instruments were designed to provide maximum overlap among questions so all three sectors could be compared head-to-head as well as collectively. The fruit and vegetable questionnaire is provided in Appendix I.

### **Characteristics of the Farm Labor Force**

One goal of this survey is to provide a population estimate of farm workers in each sector, their ethnicity, and average wages and salaries paid. Definitions of ethnicity can vary. As noted above, we used language capability to distinguish between Hispanic and non-Hispanic workers, both for hourly employees and salaried managers. Individuals using Spanish as their first language were classified as Hispanics. Then, we inquired further about this collection of workers to see how accomplished they were with English as a second language. This distinction is important because we wanted to learn more about any services farm operators would like to make available for Hispanic employees and for managers who work with Hispanic employees.

To further refine our understanding of the labor complement on each farm, we asked respondents to characterize their employees based on those with limited or substantial experience with farm work. We also inquired about working conditions for employees, as reflected in hours worked and the value of benefits provided by each farm employer. Finally, we posed several questions designed to gauge farm operators' opinions on a range of State and Federal issues surrounding farm employees and the availability of immigrant labor.

To accomplish our study objectives, the population surveyed needed to include all dairy, fruit, and vegetable farms with a high potential for using supplemental hired workers, Hispanic workers in particular. The entire list frame of farmers compiled by the USDA National Agricultural Statistics Service served as the population base for the survey. Overall sampling parameters for this survey were that the sample be drawn with a 95 % confidence level and a target Coefficient of Variation of 5 %. It was assumed that 50 % of all farm operators with hired labor would have immigrant farm workers and that we would have a 50 % response rate.

The effective subpopulations targeted for each sample, while maintaining a manageable level of costs for data collection, are shown in Table 3. Because of the diversity of farms in New York State, any given operator in this sample had a potential to be in one to three of these sub-populations. During each stage of sampling, appropriate statistical procedures were followed to remove a farm from being sampled in subsequent samples. This process was done to minimize respondent burden of answering multiple questionnaires.

The final survey sample used and rates of response are shown in Table 4. Data collection methodology involved mailing and telephone follow-up. On February 18, 2010, all sample units were mailed an initial questionnaire. About three weeks later, on March 10, a follow-up post card reminder was mailed to all sample units that had not returned their survey. At that time, approximately 460 mail responses (both usable and non-usable) had been returned for all three surveys. Calling mail non-respondents began on April 12 and was scheduled for two weeks. Approximately 650 calls were completed (again including usable and non-usable responses). The final response totaled 933 usable reports for a 51 % response rate (Table 4).

**Table 1: Farm employment by farm type: farms with payroll and number of hired farm workers, New York State, 2007**

Type of farm	All farms	Farms with payroll	Hired farm workers
	Number	Number	Number
Total	36,352	9,273	59,683
Crops:	18,743	4,606	38,518
Vegetables	1,876	699	7,943
Fruit	2,339	1,217	16,442
Greenhouse, nursery, and floriculture	2,193	897	7,893
Other crop farming	12,335	1,793	6,240
Livestock:	17,609	4,667	21,165
Dairy cattle and milk production	5,237	2,645	14,038
Beef cattle	4,803	821	2,486
Poultry and egg production	1,005	116	906
Sheep and goats	1,068	134	357
Other animal production	5,496	951	3,378
	Percent	Percent	Percent
Total	100	100	100
Crops:	51.6	49.7	64.5
Vegetables	5.2	7.5	13.3
Fruit	6.4	13.1	27.5
Greenhouse, nursery, and floriculture	6	9.7	13.2
Other crop farming	33.9	19.3	10.5
Livestock:	48.4	50.3	35.5
Dairy cattle and milk production	14.4	28.5	23.5
Beef cattle	13.2	8.9	4.2
Poultry and egg production	2.8	1.3	1.5
Sheep and goats	2.9	1.4	0.6
Other animal production	15.1	10.3	5.7

Source: 2007 Census of Agriculture (USDA, 2010d)

**Table 2: Farm employment by farm type: farm workers by number of days worked, New York State, 2007**

Type of farm	Hired farm labor (workers)		
	Total	Work 150 days or more	Work less than 150 days
	Number	Number	Number
Total	59,683	23,993	35,690
Crops:	38,518	11,766	26,752
Vegetables	7,943	2,831	5,112
Fruit	16,442	3,730	12,712
Greenhouse, nursery, and floriculture	7,893	3,659	4,234
Other crop farming	6,240	1,546	4,694
Livestock:	21,165	12,227	8,938
Dairy cattle and milk production	14,038	9,130	4,908
Beef cattle	2,486	949	1,537
Poultry and egg production	906	522	384
Sheep and goats	357	96	261
Other animal production	3,378	1,530	1,848
	Percent	Percent	Percent
Total	100	40.2	59.8
Crops:	100	30.5	69.5
Vegetables	100	35.6	64.4
Fruit	100	22.7	77.3
Greenhouse, nursery, and floriculture	100	46.4	53.6
Other crop farming	100	24.8	75.2
Livestock:	100	57.8	42.2
Dairy cattle and milk production	100	65.0	35.0
Beef cattle	100	38.2	61.8
Poultry and egg production	100	57.6	42.4
Sheep and goats	100	26.9	73.1
Other animal production	100	45.3	54.7

Source: 2007 Census of Agriculture (USDA, 2010d)

**Table 3: Proposed survey sub-population**

Sub-population	Number of farms
Operators with dairy cows and hired workers	3,453
Operators with any fruit and hired workers	1,292
Operators with any vegetables and hired workers	1,259

**Table 4: Mail survey sample**

Type of farm	Sample size	Useable responses	
		Number	%
Dairy	692	346	50.0
Fruit	592	326	55.1
Vegetables	542	261	48.2
Total	1,826	933	51.1

## Survey Results

The answers to the survey questions are summarized in the following sections. The number of employees and farms reported are a result of statistical expansions of the survey data.

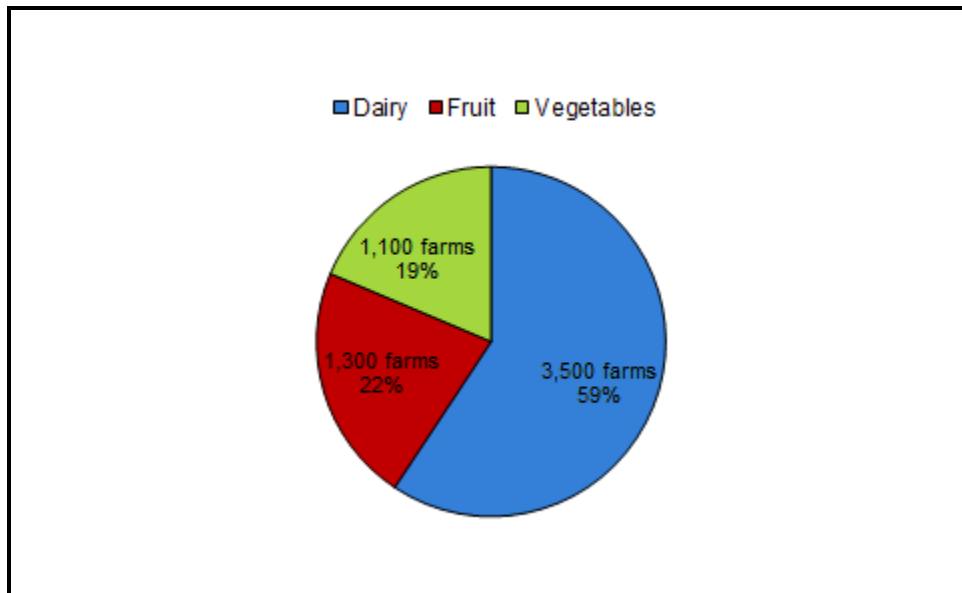
### A. Profile of Fruit, Vegetable and Dairy Farms

The focus of the survey is on the fruit, vegetable and dairy industries, three of the largest and most labor-intensive segments of New York agriculture. The figures in this section provide a general overview of farms and workers in these three agricultural sectors. Employers were asked to report the number of workers at the peak period of employment for their farm. This approach provides an opportunity to estimate the maximum number of employees on New York farms annually. When the 933 survey responses reported in Table 4 were expanded to derive population estimates, results indicate that there were 33,200 hired workers on 5,900 New York fruit, vegetable and dairy farms in 2009 (Figures 1 and 2).

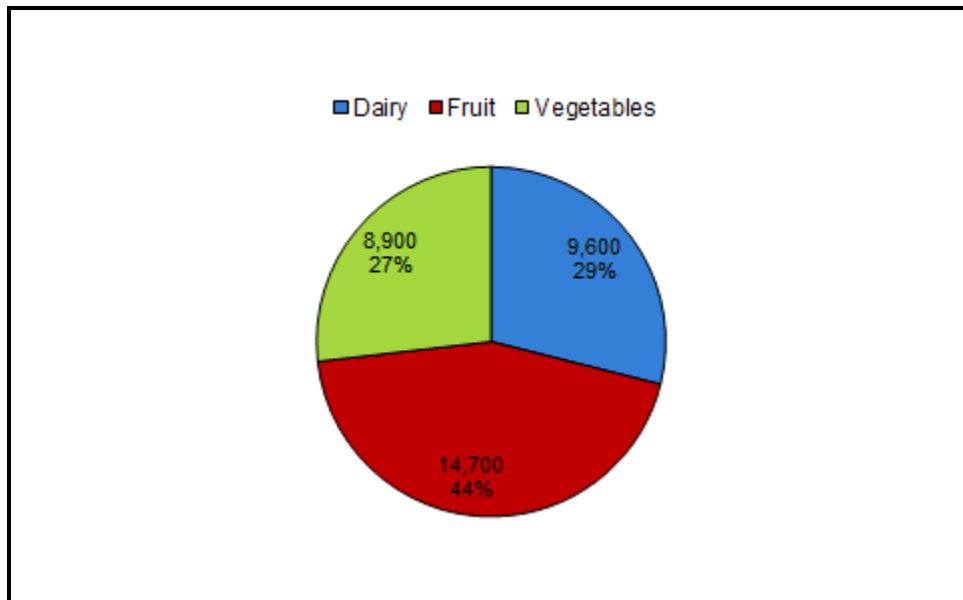
Farm employers were also asked to report the market value of their agricultural products sold in 2009; this allows for an opportunity to look at employment characteristics by farm size categories. Of the farms surveyed, a majority of farms had product sales between \$100,000 and \$499,000 (Figure 3). This result clearly illustrates our sample design and an effort to target larger farms with a higher potential to have a payroll and a hired farm workforce. In sharp contrast to our survey results, statewide estimates of farm numbers by sales class show that farms with sales between \$100,000 and \$499,000 reported by the

USDA in 2009 account for only 13% of all New York State farms (USDA, 2010b). For the largest farm businesses, 21% of the vegetable farm population sampled and 19% of the fruit population sampled in our survey had sales of \$500,000 or more in 2009; statewide, only 5% of all farms fall in this category (USDA, 2010b).

**Figure 1: Usable Surveys, Expanded Sample of Farms - Expanded survey sample, representing 5,900 New York State farms, 2009**

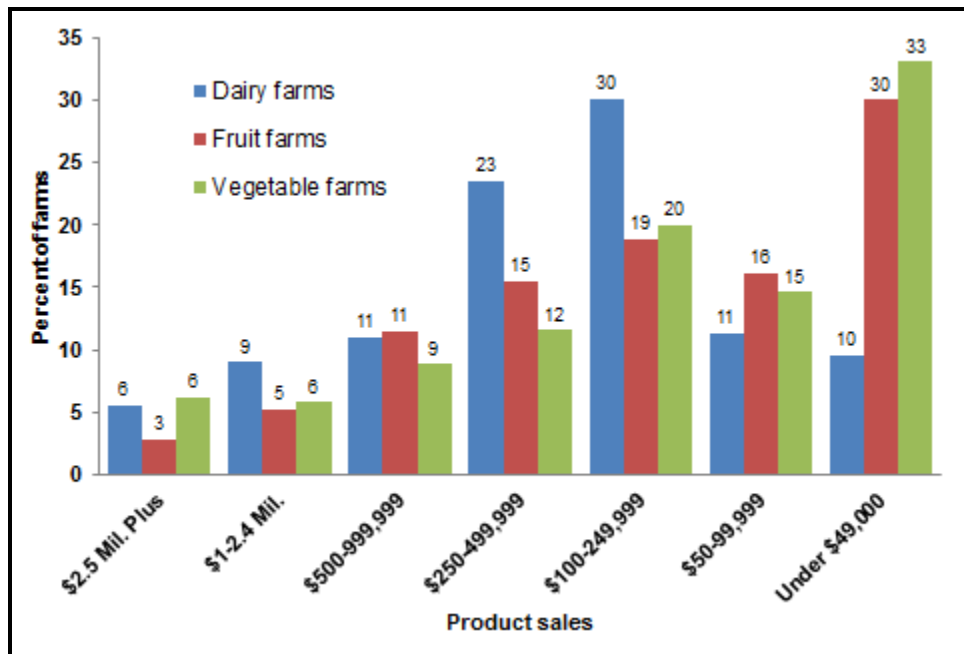


**Figure 2: Workers Employed at Peak - Estimated number of workers employed at peak, 33,200 hired workers total, New York State, 2009**





**Figure 3: Market Value of Agricultural Products - Average market value of agricultural products sold over last three years, 5,900 New York State farms, 2009**



## **B. Fruit and Vegetable Farm Laborers: Hours, Wages and Benefits**

This section describes hours, wages and benefits of production workers, specifically general laborers on New York fruit and vegetable farms. Considerable attention is paid to these types of data by farmers and policymakers. Farmers want to know how competitive their wages and benefits are within the industry as they attempt to attract the best workers to their business. Policymakers want to be able to compare agricultural industry wage rates with other industries. Figure 4-1 illustrates the size distribution of the fruit farm workforce based on the number of farms and the number of employees. For example, 8% of the fruit farms represented in the survey had only 1 hired employee while 6% of the farms had 50 or more employees. When the sample was sorted by the number of employees, 1% of the workers came from farms that employed one worker while 39% of workers were employed on farms with 50 or more workers. Figure 4-2 illustrates the size distribution of the vegetable farm workforce based on the number of farms and the number of employees. For example, 13% of the vegetable farms represented in the survey had only one hired employee while 7% of the farms had 50 or more employees. When the sample was sorted by the number of vegetable farm employees, 1% of the employees worked on farms with 1 employee while 39% of the employees worked on farms with 50 or more workers.

The average number of weekly hours general laborers worked varied widely on fruit farms. Those working less than 40 hours per week represented 35% of the workers while those working more than 70 hours represented 10% of the workers (Figure 5). Unfortunately, we were unable to collaborate our results with other surveys because other

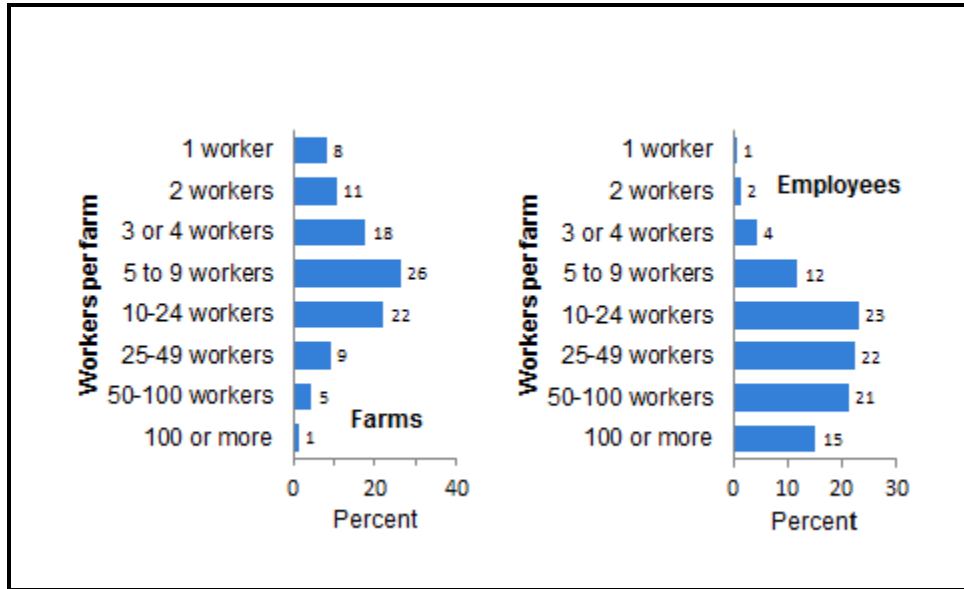
analysts have not concentrated on peak employment to allow seasonality of employment to be taken into account. The average number of weekly hours on vegetable farms also varied widely. Those working less than 40 hours represented 35% of the workers while those working more than 70 hours per week represented 8% of the workers. Recall that we asked respondents to report on number of employees, excluding paid family members, at peak during calendar 2009. Both peak employment and family relationships probably dictate our results in a significant way. Inquiring about peak employment is an explicit recognition of the seasonality involved in farm pursuits. Seasonal growing and harvesting activities in fruit and vegetable production require short term harvest workers and a variety of other part time workers.

For purposes of the current study, we ignored family employees to sharpen the study focus on ethnicity, immigration concerns and the issues surrounding policy debates on collective bargaining and overtime pay. The trade-off, once again, is survey numbers which may seem counterintuitive at first glance. That is, there is every reason to suspect that a disproportionately large number of paid family workers realize work weeks at or well above 40 hours. Counting paid family workers therefore, would likely reduce the overall percentage of workers reported at less than 40 hours per week.

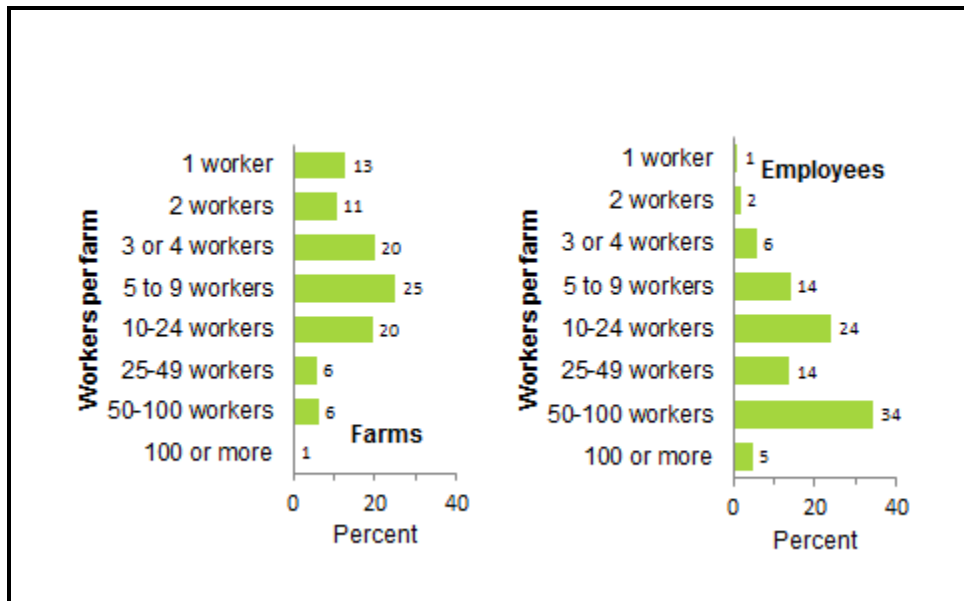
A focal point for farm labor discussions is wage rates. Figure 6 shows the average hourly wage rates reported from our survey for experienced and inexperienced general laborers. As one would expect, experienced workers were paid more than their inexperienced counterparts. Experienced general laborers on fruit farms received an average of \$10.65 per hour and inexperienced general laborers received \$8.52 per hour. Experienced general laborers on vegetable farms received an average of \$9.98 per hour and their inexperienced counterparts received \$8.25 per hour.

The presence or absence of a nonwage benefit package, along with its composition, can materially affect one's interpretation of average hourly wage rates. Our survey shows that general laborers received some benefits. These benefits can extend to one time bonuses, retirement contributions, access to health insurance, and in-kind provision of housing services. We asked farm operators to estimate the value of these benefits and assign a dollar amount to each category. Of fruit farm employers, 12% reported that general laborers received benefits valued at \$5,000 or more, in contrast with 55% that provided less than \$1,000 in benefits. Of vegetable farm employers, 17% reported that their general laborers received benefits valued at \$5,000 or more compared with 45% that provided less than \$1,000 in benefits (Figure 7).

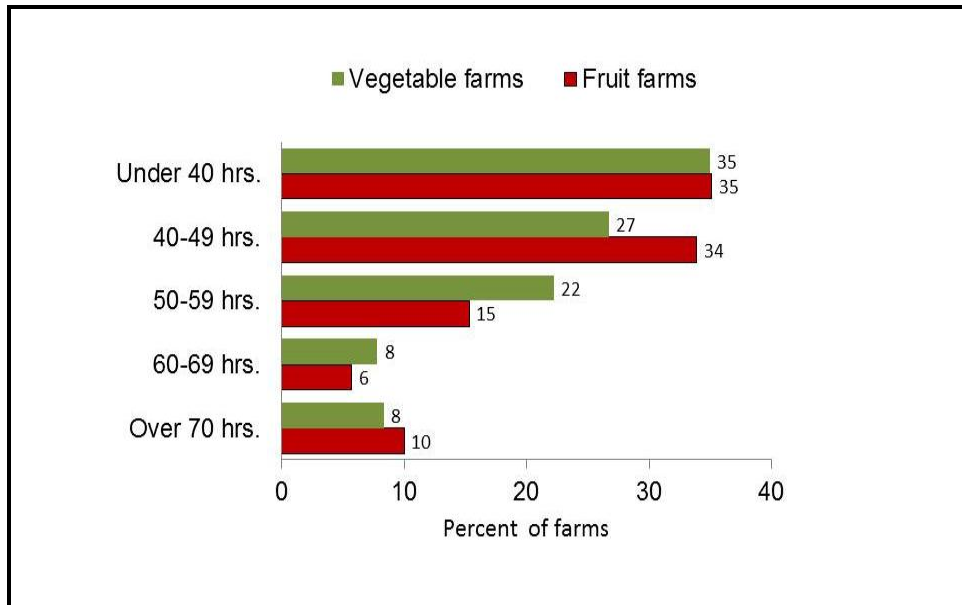
**Figure 4-1: Size Distribution of Peak Labor Force - 14,700 workers on 1,300 New York State fruit farms, 2009**



**Figure 4-2: Size Distribution of Peak Labor Force - 8,900 workers on 1,100 New York State vegetable farms, 2009**



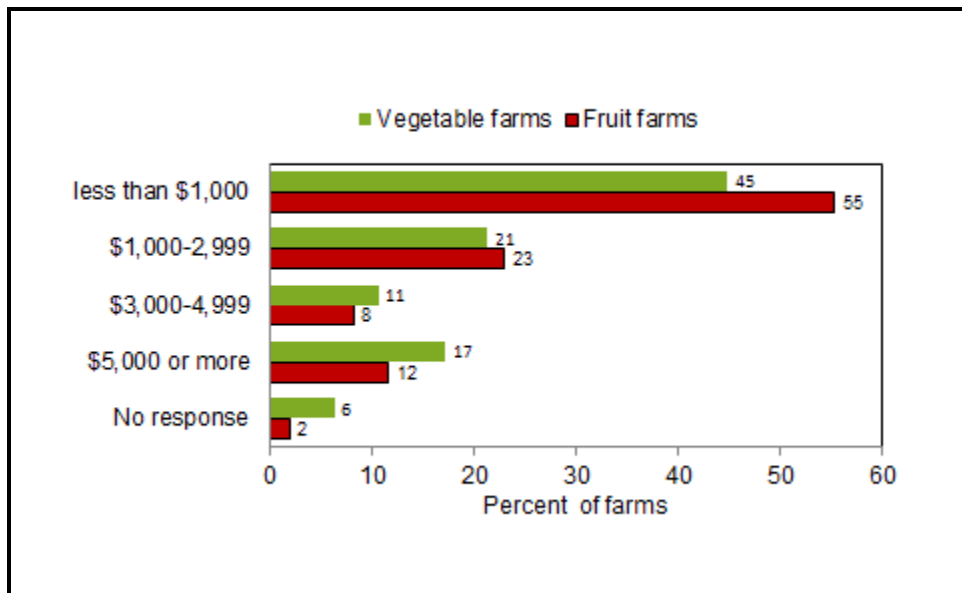
**Figure 5: Average Hours Worked for General Laborers - Average hours worked per week for general laborers on New York fruit and vegetable farms, 2009**



**Figure 6: Average Hourly Rate Paid for General Laborers - Average hourly wage rate for New York fruit and vegetable farms, 2009**



**Figure 7: Estimated Annual Benefits Provided per Hired Worker - New York State fruit and vegetable farms, 2009**



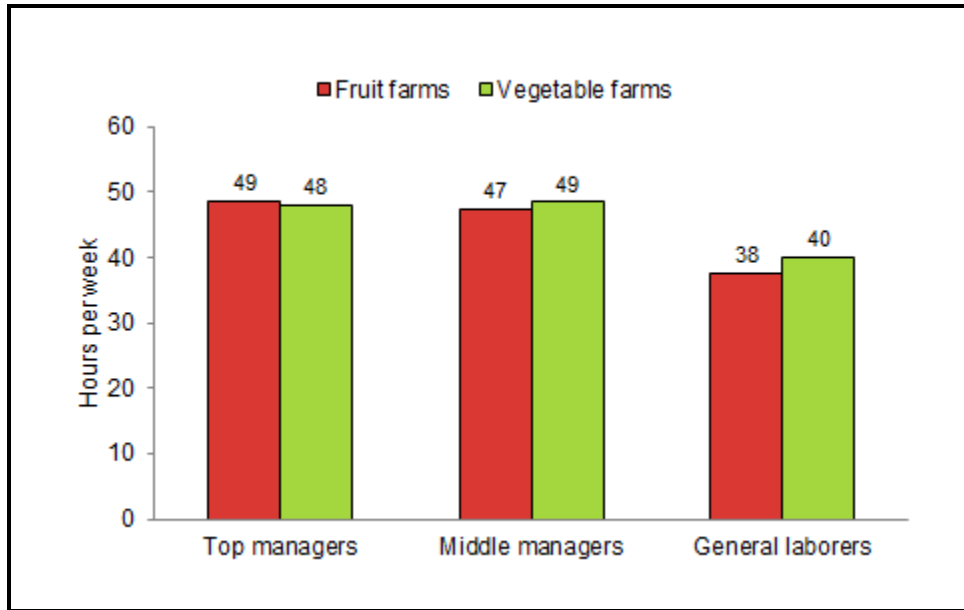
### **C. Fruit and Vegetable Farm Managers: Hours, Wages and Benefits**

This section describes hours, wages and benefits of fruit and vegetable farm managers, distinguishing between those with middle and top-level managerial responsibilities. It should be noted that respondents were not given any guidance on distinctions between middle and top managers; they defined each based on their own business situation. As fruit and vegetable farms grow over time, employers recognize a commensurate need for capable middle managers. Figure 8 shows the average number of hours that top managers, middle managers and general laborers work on fruit and vegetable farms. When the average weekly hours of top managers, middle managers and general laborers in the fruit sector were compared, we found that the top managers worked an average of 49 hours per week, followed by middle managers at 47 hours per week and general laborers at 38 hours per week. When the average weekly hours of top managers, middle managers and general laborers in the vegetable sector were compared, we found results similar to the fruit sector. Top managers worked an average of 48 hours per week followed by middle managers at 49 hours per week and general laborers at 40 hours per week.

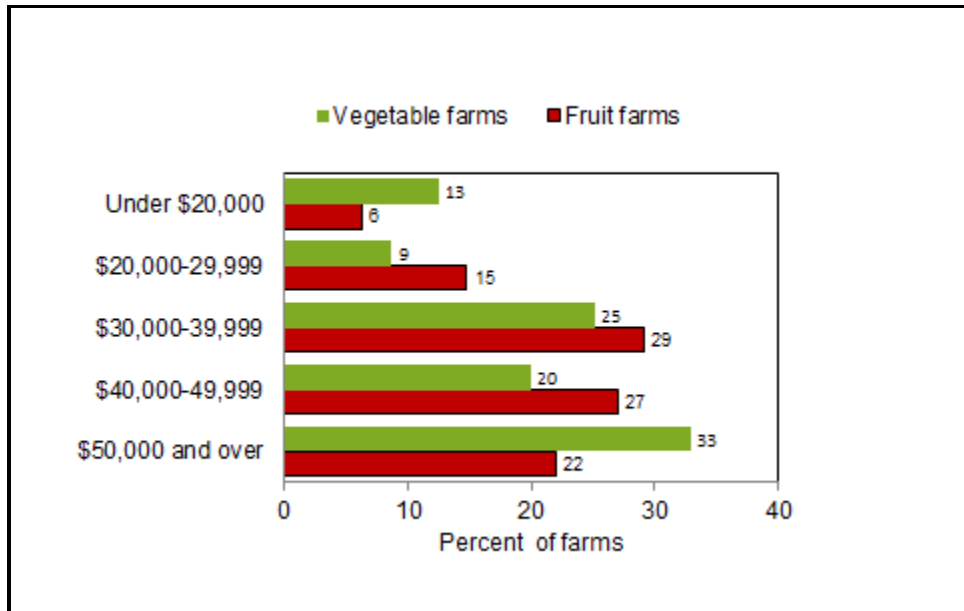
New York’s fruit and vegetable farm managers earn a wide range of salaries, as shown in Figures 9 and 10. As expected, top level managers earn substantially higher salaries than middle managers. For example, 22% of top level managers in the fruit industry and 33% in the vegetable industry receive salaries of \$50,000 or more compared with 12% of mid-level managers in the fruit industry and 6% in the vegetable industry who receive \$50,000 or more. The average value of benefits that both top and mid-level fruit and

vegetable managers received are shown in Figure 11. Almost half of the fruit and vegetable managers received benefits totaling less than \$5,000. On the other end of the scale, 10% of fruit farm managers and 8% of vegetable managers received benefits on average totaling \$15,000 or more.

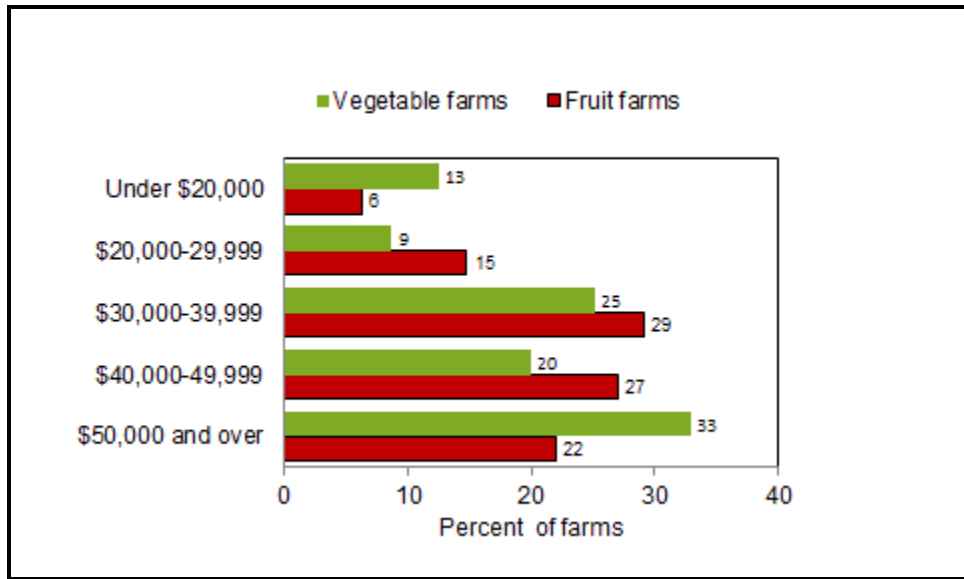
**Figure 8: Average Hours Worked Each Week by Type of Employee - New York fruit and vegetable farms, 2009**



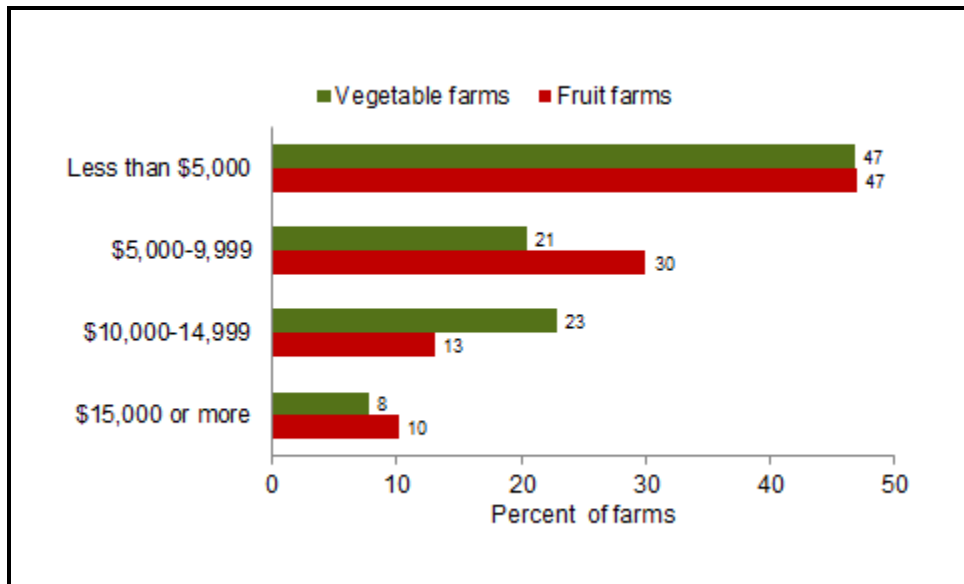
**Figure 9: Annual Salaries for Mid-level Managers - New York fruit and vegetable farms, 2009**



**Figure 10: Annual Salaries for Top-level Managers - New York fruit and vegetable farms, 2009**



**Figure11: Estimated Annual Value of Benefits Provided Per Hired Manager - New York fruit and vegetable farms, 2009**



## D. Hispanic Workforce Issues

With the current attention to immigration issues in the United States, there is increased interest in understanding the impact that immigrants have on agricultural production. We asked survey participants how many workers had English or Spanish as a first language. Table 5 shows that slightly less than half of the hired workers in this study of New York fruit and vegetable farms spoke Spanish as their first language. In total, an estimated 12,400 hired workers have English as their first language and 11,200 have Spanish as their first language.

**Table 5: Number of Workers by First Language on New York 1300 Fruit and 1100 Vegetable Farms, 2009**

First Language	Fruit	Vegetable	Total
English	7,900	4,500	12,400
Spanish	6,800	4,400	11,200
Total	14,700	8,900	23,600

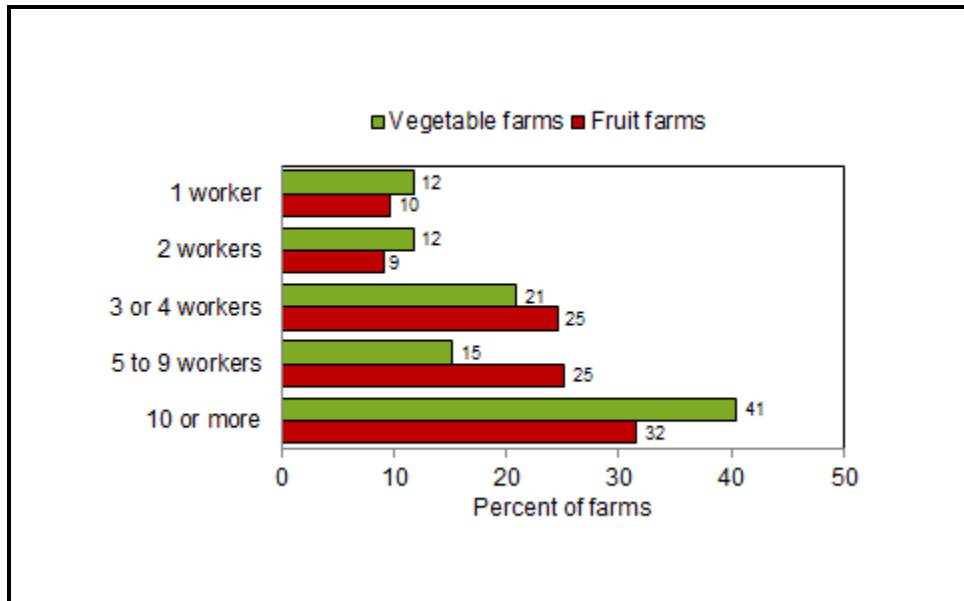
Figure 12 shows the concentration of Hispanic workers on New York fruit and vegetable farms. For example, 12% of vegetable farms and 10% of fruit farms with Hispanic workers hire only one Hispanic worker. At the other end of the spectrum, 41% of the vegetable farms and 32% of the fruit farms employing Hispanic workers had 10 or more workers. From another perspective, Figure 13 shows that 1% of Hispanic workers are employed on vegetable farms that only employ one Hispanic worker. On fruit farms again, 1% of the Hispanic workers are employed on farms with one Hispanic worker. At the other end of the scale, almost 75% of Hispanic workers in both the fruit and vegetable industries work on farms that employ 10 or more Hispanic workers. Figure 14 shows the total number of Hispanic workers and non-Hispanic workers grouped by number of workers employed. Again, this illustrates that Hispanic workers tend to be concentrated on the largest farms.

Figure 15 shows the percent of workers on fruit and vegetable farms with either English or Spanish as their first language during periods of peak employment. On both fruit and vegetable farms, Spanish speakers comprised slightly less than half of the workforce.

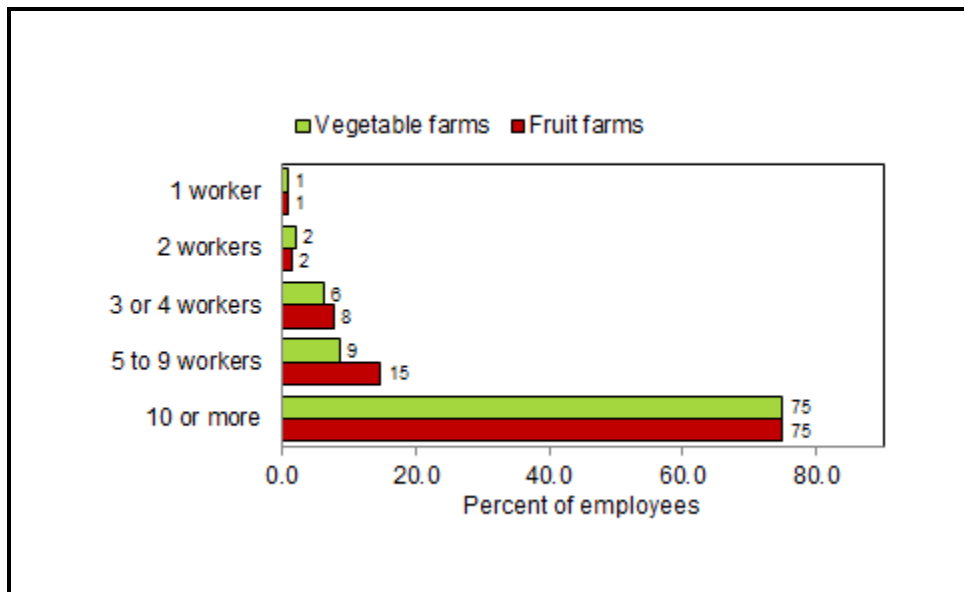
Figure 16 describes the language skills of the current Hispanic workforce. Only 16% of vegetable farms and 15% of fruit farms reported that their Hispanic workers spoke English well. The employers surveyed also acknowledged the need for services to assist Spanish speaking employees. In Figure 17, help with immigration issues was identified by employers as the most important service needed for Hispanic workers followed by English classes and access to bilingual training. The survey also asked employers to identify services to assist farm managers in working with Spanish speaking employees. The top need identified was help with immigration issues (Figure 18).



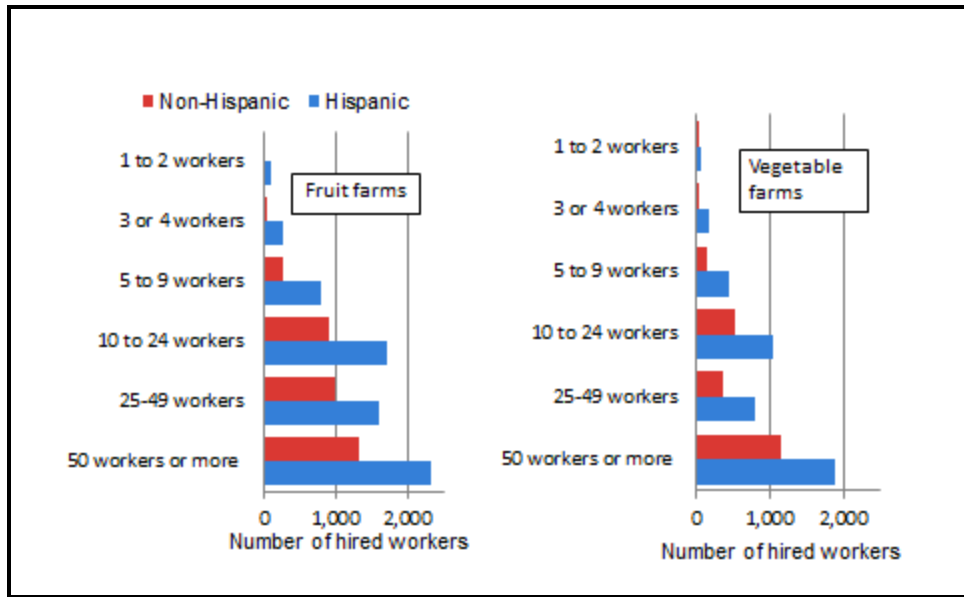
**Figure 12. Size Distribution of Peak Hispanic Labor Force by Percent of Farms - New York State fruit and vegetable farms, 2009**



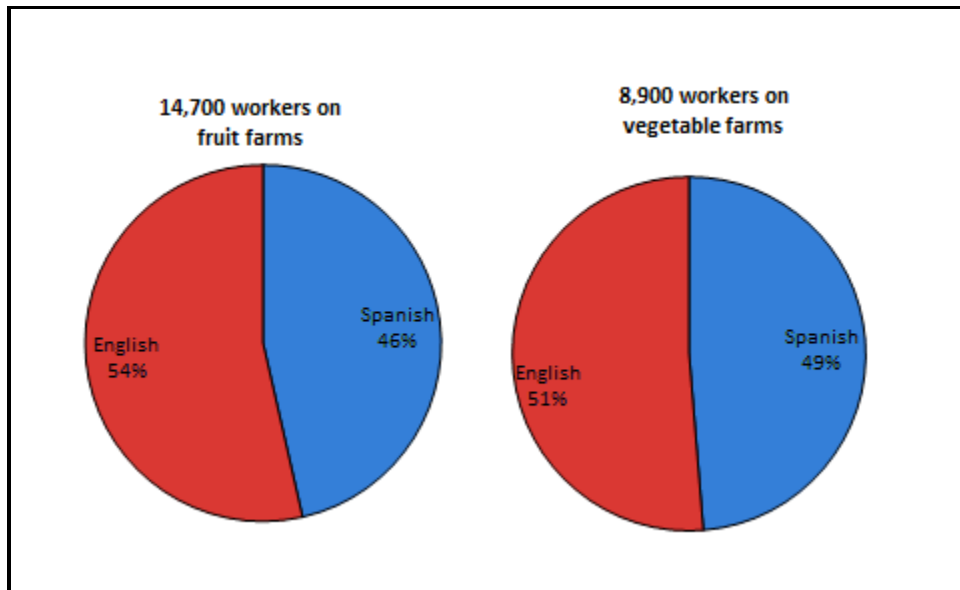
**Figure 13: Size Distribution of Peak Hispanic Labor Force by Percent of Employees - New York State fruit and vegetable farms, 2009**



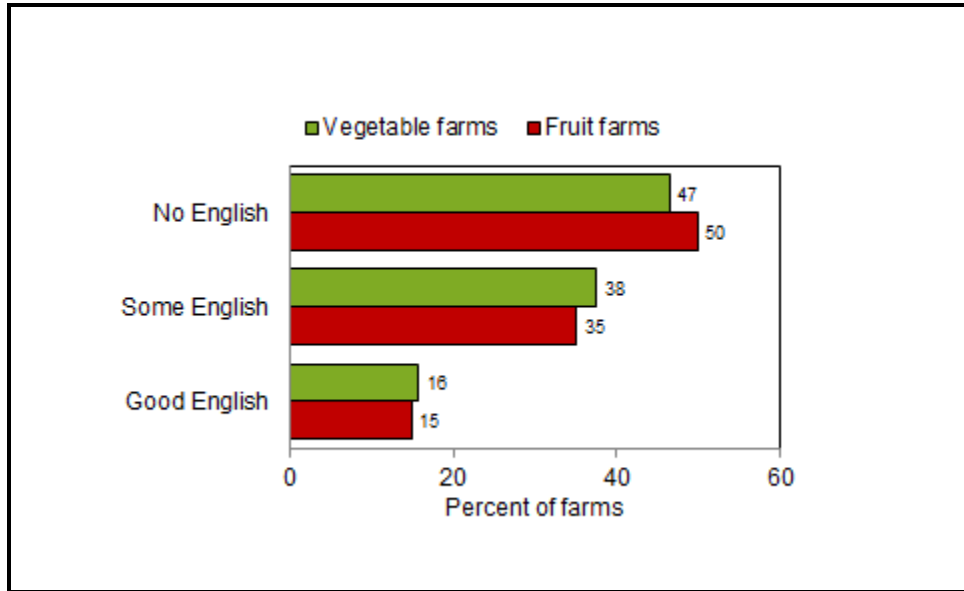
**Figure 14: Ethnicity of Peak Labor Force on Fruit and Vegetable Farms with One or More Hispanic Workers**



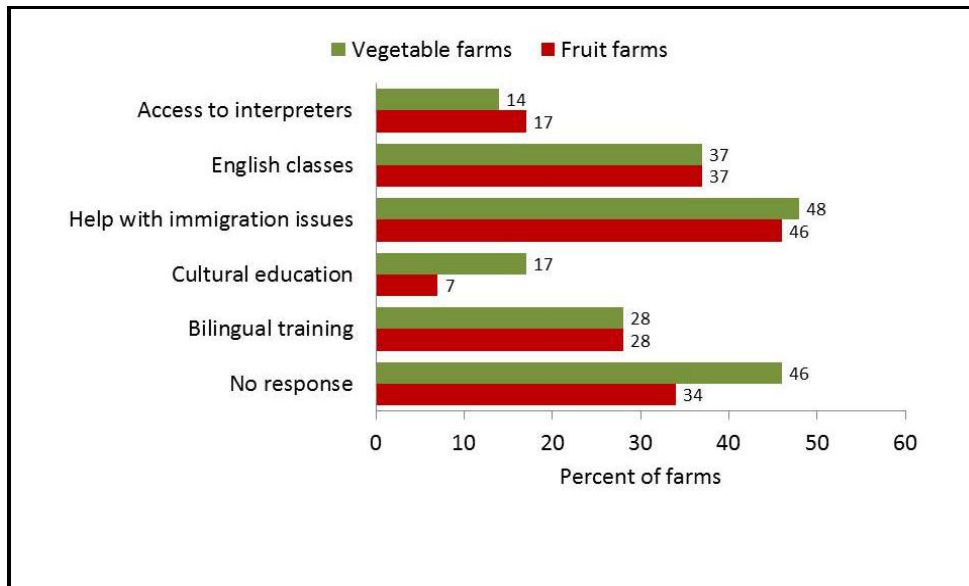
**Figure 15: Estimated Percent of Workers with Spanish or English as a First Language – 23,600 hired fruit and vegetable workers total**



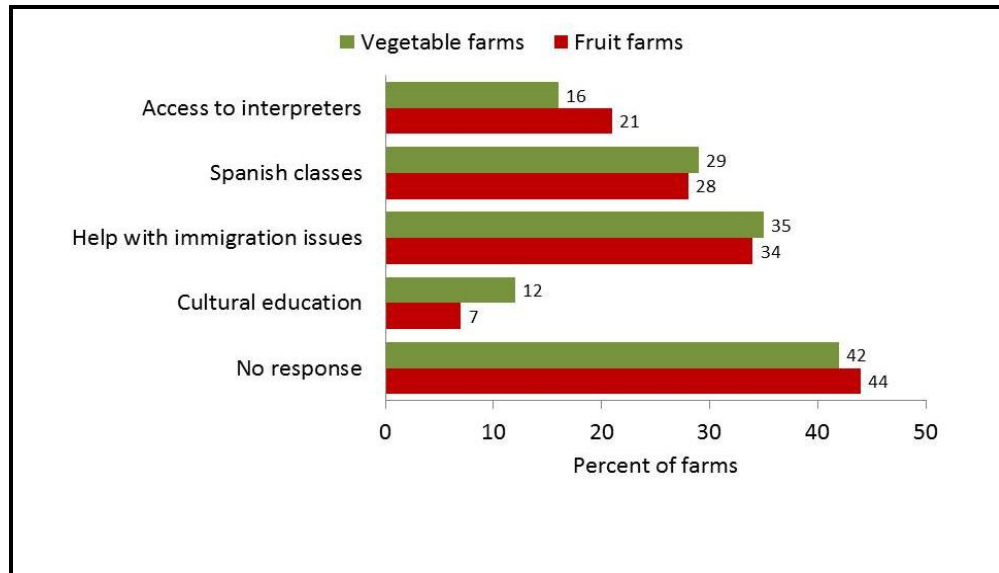
**Figure 16: Language Skills of Hispanic Workers - 11,200 workers on 979 New York State fruit and vegetable farms**



**Figure 17: Services Needed to Assist Spanish Speaking Employees**



**Figure 18: Services Needed to Assist Farm Managers Who Work with Spanish Speaking Employees**



## E. Policy Issues

One of the primary objectives of this study is to inform the State and Federal policymaking process as it impacts agricultural labor. On the State level, New York lawmakers in the past two years have debated policies that would allow collective bargaining and overtime pay on New York farms. On the Federal level, various proposed national immigration reform policies would have a major impact on agricultural producers in New York State. Survey participants were asked their opinions regarding both of these policy issues.

Farmers were asked how concerned they would be if their employees were allowed to form unions and engage in collective bargaining based on a four point scale, with one indicating not concerned and four indicating very concerned. Vegetable growers had an average concern rating of 3.24 and fruit growers had an average concern rating of 3.23.

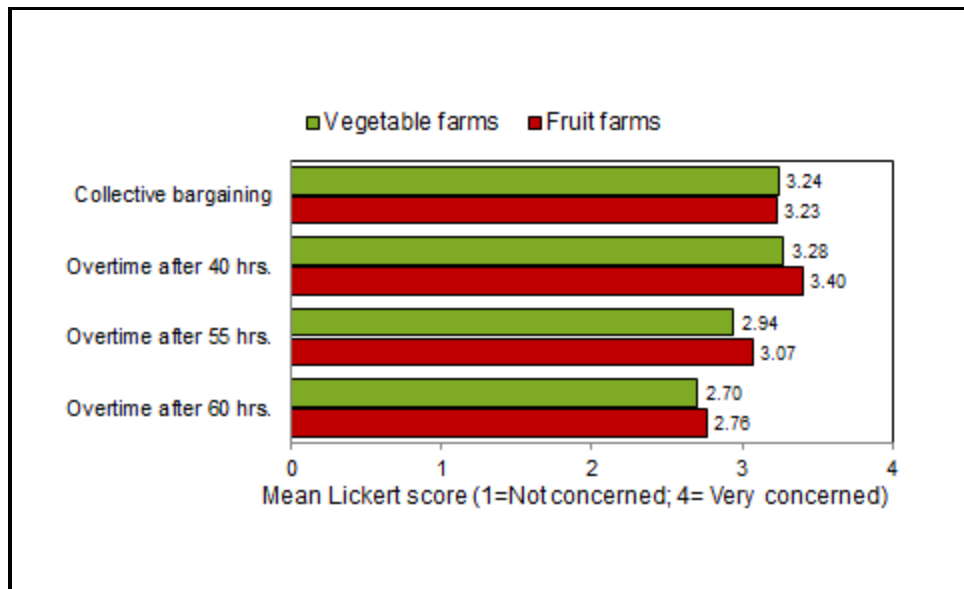
Over the past two years State legislators have proposed overtime pay after levels greater than 40, 55, or 60 hours per week. Based on these three weekly work thresholds, survey participants were asked how concerned they would be if they were required to pay overtime. When asked how concerned they would be if they were required to pay overtime after 40 hours per week; the average rating for vegetable growers was 3.28 and the average rating for fruit growers was 3.40 (Figure 19). When asked about paying overtime after 55 hours per week, vegetable growers gave an average rating of 2.94 and fruit growers gave an average rating of 3.07. Finally, survey participants were asked how concerned they would be if they were required to pay overtime after 60 hours per week. Vegetable growers gave an average rating of 2.70 and fruit growers gave an average rating of 2.76, (Figure 19).

When looking at the summary of the three overtime categories in Figure 19, it is important to note that farmer concern regarding overtime pay is still substantial even after 60 hours per week, when added payroll costs would be considerably lower than if overtime were required after 40 hours per week.

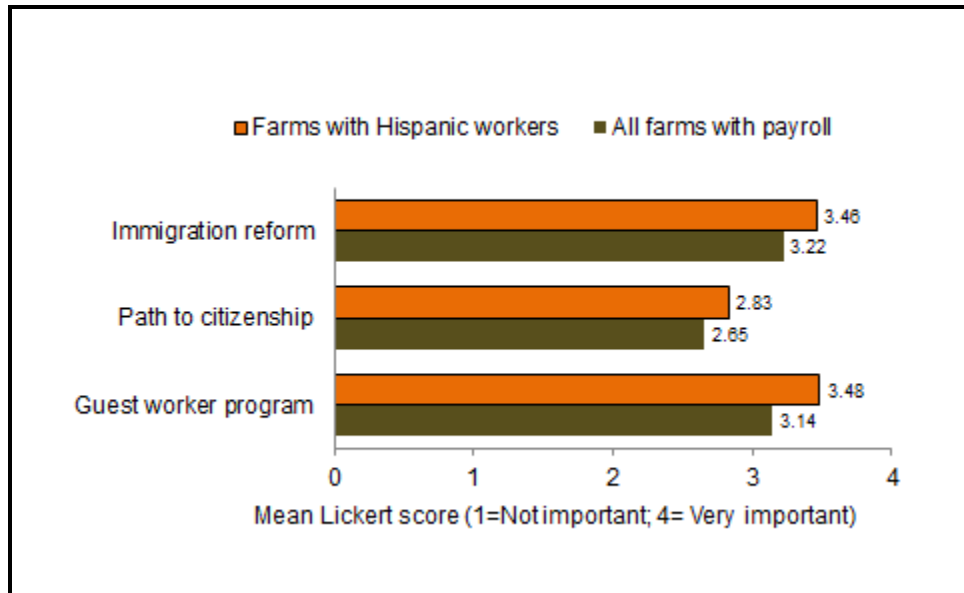
Figures 20 and 21 indicate the level of importance farm managers place on three possible immigration reform outcomes; comprehensive immigration reform, a path to citizenship or a guest worker program. The farms in the survey were divided into two groups, all farms with a payroll and farms with Hispanic workers. As expected the perceived level of importance of each policy option was higher for farmers who employed Hispanic workers compared to all farms with a payroll.

When farm employers were asked to rate the importance of immigration reform, fruit growers who employ Hispanic workers gave it an average rating of 3.48 and vegetable growers gave it an average rating of 3.32. The guest worker program option was rated high as well with fruit growers who employed Hispanic workers giving an average rating of 3.48 and vegetable growers with Hispanic workers giving an average rating of 3.41. Fruit and vegetable growers with Hispanic workers gave lower averages ratings to the path to citizenship policy option with 2.83 average rating from fruit growers and a 2.91 average rating for vegetable growers. The likely reason the path to citizenship was rated slightly lower is that fruit and vegetable growers do not view citizenship as essential to securing adequate labor as long as immigrants have a way to work legally in the United States even if it's only on a temporary basis (Figures 20 and 21).

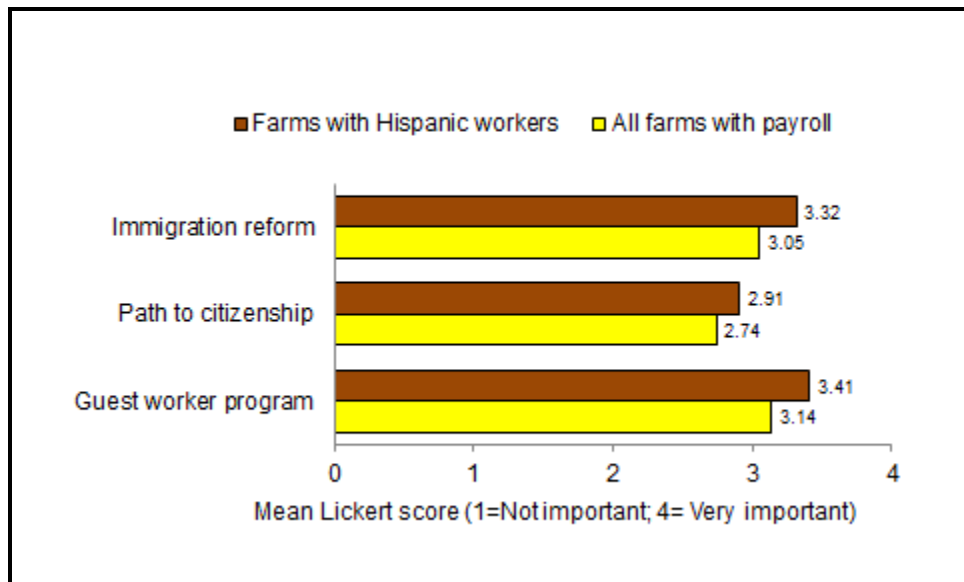
**Figure 19: Average Scores on Attitudes Toward Proposed Changes in State Law**



**Figure 20: Average Scores on Employer Attitudes Toward Changes in Federal Immigration Policies - New York fruit farms, 2009**



**Figure 21: Average Scores on Attitudes Toward Changes in Federal Immigration Policies - New York State vegetable farms, 2009**



## **Discussion & Implications**

Collecting information on agricultural workers is always challenging because of the nature of the workforce and the number of variables that must be considered. Farm work is often seasonal and the workforce is transient. In addition, the farm worker population is diverse and may include family members, contract workers, hired employees, managers and immigrants. For this study, we identified three important areas of focus: hired employees (excluding family members and contract workers), Hispanic employees and employees present at the annual workforce peak. Estimating the peak workforce has seldom been done in other studies, but doing so helps us better understand the maximum number of employees needed for agricultural production work.

This study yields results in five important areas; workforce population estimates, employee wages, benefits and hours worked, Hispanic workforce issues and attitudes regarding proposed State farm labor law changes and proposed immigration reform policies.

### **1) Agricultural Workforce Population Estimates**

Agricultural workers in the fruit, vegetable and dairy sectors make up the majority of the workforce in New York's production agriculture. Using a stratified random sample and expanding the data to the entire population we arrived at a total number of 5900 farms (Figure 1) and 32,200 farm workers employed at the peak work period (Figure 2). This is a lower number than that reported in the U.S. Census of Agriculture likely because family workers and contract workers were not counted here. The study showed that the majority of fruit and vegetable farms surveyed had farm product sales of less than \$500,000 in 2009 (Figure 3). As expected, we found that the majority of workers are concentrated on farms with sales of \$500,000 or more (Figures 4-1 and 4-2).

### **2) Farm Employee Wages, Benefits and Hours Worked**

In the absence of annual wage and benefit studies for the New York State farm workforce, occasional studies that collect wage and benefit data are extremely valuable. Farm employers are always interested in how competitive their compensation rates are compared to other farms. Also, considering recent farm labor policy discussions on both the State and Federal levels, up-to-date wage and benefit information provides policymakers with important facts about how employees are paid. This is particularly helpful, for example, when discussing overtime pay proposals at the State level and wage rates required by the Federal H-2A program (a seasonal guest worker program) at the Federal level.

We collected wage rates on two categories of fruit and vegetable farm workers. The first category was experienced general laborers with an average hourly pay rate of \$10.65 on fruit farms and \$9.98 on vegetable farms. The second category was inexperienced general laborers with an average hourly pay rate of \$8.52 on fruit farms and \$8.25 on vegetable farms (Figure 6).

There is much debate about how well farm workers in the United States are paid. When discussing farm employee wage rates, it is important to take into consideration hours worked and benefits. We found that more than 35% of the fruit and vegetable workers in this study worked less than 40 hours per week. On the other end of the scale, 10% of fruit farm workers and 8% of vegetable farm workers were employed for more than 70 hours per week (Figure 5). Employers were also asked to estimate the value of benefits paid to workers. Of the farms surveyed, 55% of fruit farms and 45% of vegetable farms provided benefits valued at less than \$1000 per year, while 17% of fruit farms and 12% of vegetable farms provided benefits valued at \$5,000 per year or more (Figure 7).

The farm operators surveyed also provided information regarding employees who held management positions. As farm businesses grow over time, the need for capable middle managers increases. Data was collected on two levels of management: mid-level managers and top level managers. As expected, top-level managers earn substantially higher salaries than mid-level managers. For example, 8% of mid-level managers on vegetable farms and 5% of mid-level managers on fruit farms earned \$50,000 per year or more (Figure 9). This compares with 33% of top-level managers on vegetable farms and 22% of top-level managers on fruit farms who earned \$50,000 per year or more (Figure 10). Farm owners are continually challenged to attract the best managers with wages and benefit levels that will be competitive with non-farm businesses.

### **3) Hispanic Worker Issues**

New York's fruit and vegetable farms accelerated hiring Hispanic workers in the mid-1990s and numbers have steadily increased since then. One important piece of information missing from most prior surveys is an estimate of the number of Hispanic workers employed on New York farms. We tailored our survey to an estimated 2,400 fruit and vegetable farms most likely to have a payroll. We estimate that these farms employed 11,200 Hispanic workers at peak during calendar year 2009 (Table 5). We found that most Hispanic workers are employed primarily on large farms (those with 10 or more total employees). However, Hispanic workers also have a presence on mid-sized and smaller farms (Figure 14).

Farm employers were asked about the level of English proficiency among their Spanish-speaking employees. New York's fruit and vegetable employers reported that almost half of their workers spoke almost no English. Employers reported that, on vegetable farms, 16% of Spanish-speaking workers spoke English well, compared to 15% of the Spanish-speaking workers on fruit farms (Figure 16). In those businesses where English language skills among Spanish speaking employees are modest, management level English proficiency and the assistance of interpreters becomes much more important. When farm employers were asked what services were needed to assist Spanish-speaking employees, 48% of vegetable growers and 45% of fruit growers listed help with immigration issues. English classes and bilingual training were also identified as priorities (Figure 17). When asked what assistance managers needed to work more effectively with their Spanish-speaking employees, 35% of vegetable growers and 34% of fruit growers said help with immigration issues, 29% of vegetable growers and 28 % of fruit growers said access to



interpreters and 46% of vegetable growers and 25% of fruit growers said Spanish classes (Figure 18). Based on the survey results it seems clear that farm employers are primarily concerned about two very important issues relating to their Hispanic employees: immigration issues and language issues. Based on anecdotal observations, New York farm managers have made great strides to overcome the language barrier. They provide job instructions and training in Spanish and many have learned some Spanish themselves. However, based on the survey results, more attention to language issues is still needed. It is also important to note that public perceptions of the importance of English proficiency may significantly influence government immigration policy in the future. A number of Federal immigration reform proposals have included a provision that unauthorized immigrants be legally required to demonstrate English proficiency to be eligible for a path to citizenship. Proposals such as these may provide further incentive for workers to learn English.

#### **4) Proposed State Labor Law Changes**

In 2009, the New York State Legislature introduced the Farmworkers Fair Labor Practices Act and, if passed, the bill would have made major changes in the laws that regulate farm employment. The legislation was narrowly defeated, but pressure from farm labor advocates to extend collective bargaining rights and overtime pay to farm employees is likely to continue. Because this legislation was pending at the time the survey was designed, it was decided to add questions that would help document farmer attitudes toward granting collective bargaining rights and overtime pay to farm employees.

When farm employers were asked how concerned they would be if the State allowed their workers the right to form unions and engage in collective bargaining, the respondents indicated a high level of concern (Figure 19). From a union organizing perspective, New York agriculture is a relatively small economic sector and business premises are geographically dispersed. Nonetheless, if workers have the option to form unions, farmers fear that union organizers would become active in the State. Anecdotal reports from farm employers indicate that they view the potential of unionization as a direct impediment to management. They fear that they would lose their flexibility to manage and that the farm's employer-employee relationships would turn impersonal and adversarial. There were several versions of the proposed legislation. The bill that was voted down on August 3, 2010 would have granted collective bargaining rights to employees working on New York farms that sell more than \$650,000 in farm products annually.

When asked how concerned they would be if State law required them to pay overtime, respondents also indicated a high level of concern (Figure 19). There were several different overtime pay proposals. The original bill would have required overtime pay after 40 hours per week. The bill that was voted down on August 3, 2010 would have required overtime pay after 60 hours per week and then beginning in 2013 overtime pay after 55 hours per week. The survey questions were designed to capture farm employer attitudes regarding these three overtime pay scenarios. When asked how concerned they

would be of State law required them to pay overtime after 40 hours, the average concern rating on a four point scale was 3.24 for vegetable growers and 3.23 for fruit growers. Levels of concern were slightly less if farmers were required to pay overtime after 55 hours per week or 60 hours per week. Media coverage of the proposed Farmworkers Fair Labor Practices Act documents the farm employers' position that the bill would increase their labor costs dramatically.

Given the long history and contentious battle over agricultural labor exemptions like collective bargaining and overtime pay in New York State, it is likely that the conflict over these issues will continue. This is the first study in New York to collect data on farmer attitudes regarding overtime pay and collective bargaining. Having data that reflects the concerns of farm employers will help to inform the discussion in the likely event that similar legislation is introduced in the future.

## **5) Immigration Reform**

Immigration concerns have become a major issue for New York farm employers and Hispanic workers. Figures 20 and 21 show that fruit and vegetable employers and their Hispanic workers feel that help with immigration issues is the area of greatest need. There are many Hispanic immigrants working on New York farms and it is likely that a portion of these immigrants are not authorized to live and work in the United States. In 2006 the PEW Hispanic Center reported an estimated 11.5 to 12 million unauthorized individuals in the United States (Passel, 2006). More recent evidence indicates that numbers of unauthorized individuals are currently lower (Passel and Cohn, 2010). In recent years immigration enforcement activities across New York State have created a great deal of anxiety for farm employers and their workers. Many farm employers feel that the best solution to the uncertainties created by immigration enforcement on New York farms is a new set of Federal immigration policies that will allow employees a path to citizenship as well as a policy that will provide a streamlined guest worker program. Survey respondents who currently have Hispanic employees rated highly the importance of a national immigration reform policy, a path to citizenship and a guest worker program. While all are important, a path to citizenship was rated slightly less important (Figures 20 and 21). Not all Hispanic immigrants want to be citizens or live in the United States over the long term. Rather they want the opportunity to work in the United States temporarily to support family members in their home country (Maloney and Grusenmeyer, 2005). From the farmer's perspective the most practical solution to the unauthorized immigrant problem is a new set of Federal immigration policies. Also, from the farmer's perspective, increased immigration enforcement in the absence of a workable policy creates substantial labor supply uncertainty if a farm relies on immigrant workers as its primary labor pool.

## **Summary**

Farm managers today are facing a variety of labor related challenges. On New York fruit and vegetable farms labor is the largest business expense (White et al, 2009). An adequate supply of productive and motivated workers is essential to maintain a viable agricultural industry in New York State. The challenges that farm employers face are both internal and external to the business. Internal factors include the development of competitive wage and benefit packages, appropriate work schedules, and creating a work environment where employees will stay with the business over the long term and be productive, satisfied and motivated. Externally, farmers face potential State policy changes relating to overtime pay and collective bargaining and Federal policies relating to immigration reform and guest worker programs. Successful farm human resource management will increasingly require managers to adopt top-notch human resource management practices including competitive wages and benefits, as well as to actively support government policies that help ensure an adequate supply of qualified workers.

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**NATIONAL  
AGRICULTURAL  
STATISTICS  
SERVICE**

# New York Dairy Fruit and Vegetable Survey 2010

**New York Field Office**  
10B Airline Drive  
Albany, NY 12235-1004  
Phone: 1-800-821-1276  
Fax: 1-800-591-3834  
Email: nass-ny@nass.usda.gov

New York State farmers continue to deal with changes and challenges in acquiring and retaining farm labor. We are asking for your input on several key labor issues. Please help by completing and returning this questionnaire. Individual responses are kept confidential by law. Thank you for your cooperation.

1. Is your operation currently producing farm commodities for sale?

Yes (Continue to #2)	No ⇒	If no, what year did you exit farming? (Enter year and end the survey) Please return the survey in the enclosed envelope. Thank you for your time.	0101
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2. How many hired workers were employed on your farm during the peak of 2009?  
(Exclude family members, partners and workers provided by a third-party contractor)  
If none, skip to question 16.

0201
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3. How many of these hired workers speak Spanish as their first language?

0301
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- a. How many speak almost no English?
- b. How many speak some English?
- c. How many speak English very well?

0302
0303
0304

If no Spanish speaking workers are on your payroll, skip to question 6.

4. What opportunities and services would you like to have available to help your Spanish-speaking employees?

(Enter "1" in the appropriate box for all that apply below)

Access to interpreters	0401	Cultural education	0404
English classes	0402	Bilingual training	0405
Help with immigration issues	0403	Other	0406

If no Spanish speaking workers are on your payroll, skip to question 6.

5. What opportunities and services would you like to have available to help farm managers work with your Spanish-speaking employees?

(Enter "1" in the appropriate box for all that apply below)

Access to interpreters	0501	Cultural education	0504
Spanish classes	0502	Other	0505
Help with immigration issues	0503		

6. What is the average wage you pay for (exclude managers, family members, and partners)?

	Experienced			Inexperienced		
Milkers	0601	\$ _____	Per hour	0602	_____	Per hour
General farm laborers	0603	\$ _____	Per hour	0604	_____	Per hour

7. On average how many hours per week do milkers and general laborers work? 0701

8. For ALL benefits you offer to your hired worker(s) (exclude managers, family members, and partners):  
Enter "1" in the appropriate box.

Housing	0801	Health ins.	0803	Transportation	0805
Retirement	0802	Paid time off	0804	Bonuses	0806

9. What is the estimated annual value of benefits provided per hired worker, excluding mandatory withholding for Social Security and unemployment insurance (exclude managers, family members, and partners)?

Less than \$1,000 = 1      \$1,000-\$2,999 = 2      \$3,000-\$4,999 = 3      \$5,000 or more = 4      Enter Code 0901

10. Please complete the following table for any managers you employ (*exclude family members and partners*)

Type of manager	Annual Salary		Avg number of hours worked per week	Typical years of manager experience (Enter "1" in appropriate box)	
	Code	Per year		Code	Up to 5 years
Top level hired manager	1001	\$ _____	1002	1003	LLe Up to 5 years
				1004	5 years or more
Hired middle manager	1005	\$ _____	1006	1007	LLe Up to 5 years
	000			1008	5 years or more

11. Please enter a "1" for ALL benefits you offer to your hired manager(s) (exclude family members, and partners):

Housing	1101	Health ins.	1103	Transportation	1105
Retirement	1102	Paid time off	1104	Bonuses	1106

12. What is the estimated annual value of benefits provided per hired manager, excluding mandatory withholding for Social Security and unemployment insurance (exclude family members and partners)?

Less than \$5,000 = 1      \$5,000-\$9,999 = 2      \$10,000-\$14,999 = 3      \$15,000 or more = 4      Enter Code 1201

In 2009, the New York State legislature proposed changing State labor laws applying to farm employees. One provision would give farm employees the right to form unions (collective bargaining). Another would require farmers to provide overtime pay at the rate of time and one half.

13. How concerned would you be if State law allowed your workers to form a union & engage in collective bargaining?

Enter "1" in the box you agree with

Not Concerned	Somewhat Concerned	Concerned	Very concerned	Don't know
1301	1302	1303	1304	1305



14. How concerned would you be if state law required you to pay overtime after:

Enter "1" in the box you agree with

40 hours per week?

55 hours per week?

60 hours per week?

Not Concerned	Somewhat Concerned	Concerned	Very Concerned	Don't Know
1401	1402	1403	1404	1405
1411	1412	1413	1414	1415
1421	1422	1423	1424	1425

15. Please indicate how important each of the following immigration issues are to your business

Enter "1" in box you agree with

A national immigration reform policy.

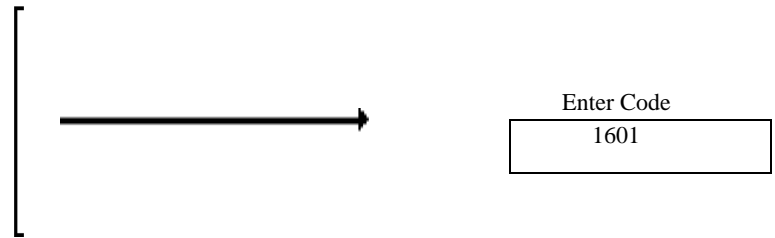
A path to citizenship for unauthorized workers

A guest worker program

Not Important	Somewhat Important	Important	Very Important	Not Applicable
1501	1502	1503	1504	1505
1511	1512	1513	1514	1515
1521	1522	1523	1524	1525

16. What is the average market value of agricultural products sold from your farm over the last three years, not including direct government farm payments

- Less than \$49,000 =
- \$50,000-\$99,999 =
- \$100,000-\$249,999 =
- \$250,000-\$499,999 =
- \$500,000-\$999,999 =
- \$1,000,000-\$2,499,999 =
- \$2,500,000 and over =



The survey results will be available on the internet at <http://www.nass.usda.gov/ny>  
 This completes the survey. Thank You

For office use only								
Response		Respondent			Mode		Enum.	Eval.
1-Comp	9909901	1-Op/Mgr	4-44-Partner	9909902	1-Mail	9909903	0090098	0100100
2-Refusal		2-Spouse	9- 9-Other		2-Tel			
3-Inac		3-Acct/Bkpr			7-Fax			

**OTHER A.E.M. RESEARCH BULLETINS**

<b>RB No</b>	<b>Title</b>	<b>Fee (if applicable)</b>	<b>Author(s)</b>
2011-01	Survey of New York Dairy Farm Employers 2009		Maloney, T. and N. Bills
2010-01	Measuring the Impacts of Generic Fluid Milk and Dairy Marketing		H. Kaiser
2009-01	Dairy Farm Management Business Summary, New York State, 2008	(\$20.00)	Knoblauch, W., Putnam, L., Karszes, J. and J. Anderso

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